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J. C. C. C.

*Plate I*



THE  
ART  
OF  
MINIATURE PAINTING  
ON  
IVORY.

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BY ARTHUR PARSEY,  
PROFESSOR OF MINIATURE PAINTING AND PERSPECTIVE.

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## P R E F A C E.

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MINIATURE PAINTING is a branch of Art much sought on account of its apparent simplicity, but to acquire it thoroughly requires more application and research than is usually imagined. The proper foundation (Drawing) is in most cases passed over, and a difficulty arises, which proves fatal to the most anxious exertions.

In this treatise I have endeavoured (shortly) to inculcate the necessity of first acquiring the preliminaries, and then going hand in hand with the successful votaries of the art. I have been brief, lest prolixity might deter and confuse, trusting that those who take this treatise for a guide, will successively practice each maxim, fully understanding one before proceeding on the next; the result, by such means, will elucidate more, and open the understanding better, than extended

theory, which is ever unintelligible, till practice has given the means of comprehension. Having passed the difficulties, I am aware of the steady perseverance that must be adopted by each follower, who must rely on the master's dictates, or he will, by over-anxiety, defeat his own object.

Freedom of hand is so obviously necessary, that I need not recommend the adoption of the system laid down for handling the pencil; trying it will be the best proof of its practical utility. The benefit to be derived from the geometrical problems can only be felt by those who may have the industry to work them by scale.

The articles on Colour, and compounding Tints, will guide the student, who, while using them, will elucidate many points which might be described at great length without effect; indeed, from experience, I find it true, that every one must gain more by self-exertion than from others; for this reason, I consider a too elaborate description obviates its purpose, so long as sufficient is stated to assist the practitioner.



The “considerations” are the result of experience ; and I have offered them, that the attention may be directed aright, forewarned of difficulties, which time and practice only can teach.

The Sitzings for a Miniature I have endeavoured to render as intelligible as possible.

The use I make of the Scraper is new, and while it adds a lustre to miniature painting, I trust the connecting idea on oil painting may give a reputation to British works, which the talent of this country is fully competent to merit.

Being actively engaged in the profession, my leisure is not sufficient to enable me to be studious of literary perfection ; contenting myself with the endeavour to be useful, I am compelled to sacrifice the ornamental.

*Burlington Arcade,  
January, 1831.*

DIRECTIONS TO THE BINDER.

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Plate 1, opposite Title.

Plates 2, 3, 4, 5, 6, 7, 8, at the end of the Treatise.

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THE  
ART OF MINIATURE PAINTING.

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THE first consideration for the juvenile Artist and the Amateur is DRAWING, which it is indispensable to acquire with some proficiency, before they indulge in the pleasing part of colouring. The fascination of colour is so universal, that the eagerness to commence upon it hinders many from giving drawing its proper attention. Students fancy much practice with the pencil quite unnecessary, but, however great the desire may be to learn this art, they are rarely so fond of the practice of the pencil, as to continue long enough at it to find their powers in drawing adequate to their practice in colour. Colour is pleasing and im-

presses the mind—drawing is intense, and considered laborious—without system, to make it inviting and genial. Masters yield to the importunities of pupils, which are too often seconded by their friends, who are as anxious as the young folks to see something more showy than mere pencil or chalk drawings. The generality of masters and mistresses of seminaries, and drawing-masters, both at school and in private teaching, can scarcely venture to continue their pupils any length of time, upon the fundamental principles of the art; it being so necessary, under the influence of general expectation, for them to produce something which shall court the flattery of visitors and connexions, little being thought of such productions as only exhibit those rudiments of form, which alone give propriety to the earliest and the maturest efforts of genius—outline. It is to be regretted that teachers (of reputation) are not left uninfluenced by these considerations, and might advance their pupils only, at those periods, when their information rendered them truly fit to proceed to the next step in the art. Talent in this country is equal to any other nation or climate. It has been thought we are too



near the North Pole for the arts to flourish equal to the warmer climates : I cannot see that the climate has any reference to pictural production. The mind, being superior to nature, reflects on her works with equal activity in the frigid or the torrid zone. There would be more pre-eminent talent, if the imitative faculties were early directed to a proper consideration of what is truly essential to the pursuit, by understanding the nature of the mind, and bringing it into that order and arrangement, that the fullest scope may be given to its powers. In foreign countries, there is a greater facility in getting at works of established reputation by the young amateur and artist ; this easy approach, and number of works, induces to better and greater practice. The use of chalk, the consequent larger scale of drawings, and excellent archetypes, are reserved in this country for those only, who, at a maturer age, have the chance or the means to get at them. It is difficult for the early British amateur to go further than drawing from cheap-printed drawing books, or a medley of drawings, till he has advanced to an age to be placed under an established master, or is doomed

to an incongruous pursuit, and frequently, I have no doubt, the poverty of the productions which have fallen in his way to copy (with no system to proceed on) has cramped genius which, if properly tutored, might have been of the most eminent cast. Extensive practice, easy access, multiplicity of good copies, confluence of students, and the consequent collision of ideas, give a comprehension and clearness to the imitative mind, which the secluded genius of this country can only derive from fortuitous circumstances, and an unextinguishable perseverance.

Difficulties certainly stimulate genius—often to extreme exertion—but if, unhappily, it be isolated, unaided by the influence of kindred genius, shut out from the museum of talent, it dies unknown in its own element. Fostered genius, fed by the hand of nature, warned of the crudities, taught the beauties, mixing with the arduous, competing with the judicious, owns no bounds, save those of nature.

The easy access to artists, galleries of pictures, statues, busts, &c., by the general population abroad, who can daily witness the process of works

of art, much is thrown into the scale in favour of popular judgment. The public thus derive a theoretical taste; they see the copy and the original, the comparison pointing out the excellence of the one or both—they see the *progressive* practice necessary to excellence, and are not surprised at its tardiness—and they justly estimate the talent which wins the prize of superiority. Persons thus accustomed to the daily operations of the art, are not so likely to be anxious to push the pupil on too fast, but would rather wait till the ideas and information may assist in the progress.

Every master who teaches drawing, and every person who attempts it without a master, should make it a mental study. The mind should be fully conscious of its capabilities; objects to be represented, with every circumstance connected with them, should be reviewed, and the representations made with mechanical feeling.

The very touch must be so sensibly distinguished, that the sight may be considered only to direct the hand to the proper part of the surface on which the pencil or chalk has to act. The strength, delicacy, ease, continuance, and character of each

part should be the language of feeling—not a mere thicker or thinner line. It may appear ostentatious or fastidious, but the peculiar character of the various parts of a drawing in pencil or chalk, should be read as so many hieroglyphics of the artist's mind, or that soul which gave form and character to the representation.

The merit of a good drawing consists in its communicating to the inspector, what words do in conveying sentiment—the mind of the author, and the object he has in view. This, properly speaking, is the *spirit* of drawing, and is a perception resulting from the whole, rather than any particularized section. The goodness of the marks or lines, judged of merely as such, may properly be termed manual production. There should appear an equal readiness of touch, whether thin or thick, without a falling off in parts, which exhibits fatigue, want of interest, or want of perception. Aptness in the quality of touch to different forms should be generally manifested, or the forms and properties of them would be jumbled together in a mass of feeble chalk or pencil.

The following observations are intended to give

the juvenile artist some idea of outline, &c. The visible productions of nature by this art are depicted on superficial substances by lines, and have reference merely to form ; colour, in the forms, and light operating on them, are distinct considerations. There are no lines in solid or aëreal forms but for the purpose of representation by colour, light, and shade ; the boundary or termination of objects is by the art made by lines—termed outlines ;—these should describe the visual boundary of curves, or, we may say, the chord of every curve, all ridges, or boundaries of squares, angles, and irregular forms. In irregular forms, superficies which deviate but little from the direct vision, that is, very much fore-shortened, may be outlined. Every form, which has a boundary, is fitted for outline, whether square, angular, irregular, circular, or compounded ; the two first, having decided ridges or boundaries of superficies, are readily perceived and imitated in outline ; circular superficies require more consideration, as they require the knowledge of light and shade, not outline, to depict. The outline of a sphere is but a hoop till assisted by shade. The sections of curves have

ridges and half-circularity—as, half a sphere has the flat surface and the half globe, drawn by a straight line and a semicircle, unless viewed at an angle from the line of its base. Part of a sphere, produced from the centre by two parallel cuts, is drawn by two parallel lines and two short sections of a circle at each extremity, till held in an indirect line of vision. Anything possessing form, neither angular, square, nor circular, but rather having each in some degree, are less readily comprehended. It is necessary to distinguish what is fitted for outline, and what to leave to be effected by shadow. For instance—looking full at a bust of a young female, the circular boundary of the head and face—the curves of the parted hair—the circular ridges of the eyelids, &c.—the termination of the lower part of the nose, and the serpentine or bow-like edges of the lips, are distinct objects for outline. Turning the bust to a three-quarter view, only one side of the nose is seen, and the top surface becoming a circular ridge must be outlined. Draperies are to be considered in a similar way; the boundary of the whole, the sudden ridges or collapsing of folds, decided ter-



minations of parts, but none of those breadths which have only the inflections of shade are to be outlined. It may not be superfluous again to remark, that it is indispensably necessary to give form, colour, and light, a distinct and attentive consideration, without confounding the one with the other, both for the purpose of having a just idea of objects, and not to be devoting time and attention, or rather mis-directed application, to parts of objects which properly belong to another class of imitation. Without being clear on these points it is apt to perplex those who include boundaries of shade, &c. with colours and ridges—increasing their labour, and dwindling into useless minutiae—sacrificing freedom and breath.

Outline is one of the most valuable qualities of an artist, the basis of his knowledge, and the vehicle for the imitative faculties. Persons who cannot draw, have never imagined the contour and outline of parts, and many who attempt drawing are mortified and perplexed at first, because they cannot proceed rapidly, and if drawing without a copy, are absolutely self-angry, because they do not know the form, combination of objects, or in other

words they have not bent their attention to the particulars or nature of outline, which truly is to understand natural and mechanical construction in inanimate objects, anatomy, philosophy, physiology, &c. in the human figure—natural history in quadrupeds, &c., or as a summary—the knowledge of nature.

As this learning is too extensive for one mind, we see some more excellent than others, according to their forte or selection of objects for representation.

When a true conception of outline, or the construction of objects is formed, light, and its attendant shade, will claim a pausing consideration; light is divisible into many kinds, and each kind into infinite and imperceptible gradations of strength: there are sunny lights, still lights, candle or artificial lights, reflected lights, &c., dwindling each from its utmost power, by millions of inflections—to darkness. Every class of light, darted on an object, casts from the object a shade partaking of its diverging form, which is, properly, shadow—cast on other superficies. The object itself, which casts the shadow, is influenced by

shade, as its parts stand less opposed to the direct rays of light, which produces a variety of tones, equal to the angles of the rays, and are separately to be considered from shadow. The direction from whence the light is received, all the points to which it can be shifted, or (which is the same) the objects transposed, or interfered with, by the intrusion of other light; the distance from the light, and each gradation, are not the concern of people in general, and are only to be understood by the closest observation and reflection. To understand the influence of light, it is advisable to place some object in a variety of directions and carefully examine every change; to place the same object under the influence of artificial light; to lessen the power of the light in both cases, by introducing a light from an opposite or lateral direction; or to place a white sheet near the object to witness the effect of reflected light. One examination may lead to a simultaneous consideration on the current diversity of light.

After the study of form, the due examination of light (which necessarily introduces shade), colour naturally follows. Blue, red, and yellow, are the primitive colours, to which may be added black

and white : green, brown, orange, purple, &c., are compounds of the primitive colours ; objects simply then, are blue, red, yellow, black, white, or their compounds. As form is perfected to the vision by light and shade, it is dignified by colour and diversified by reflection. It is pleasing to study form, light, and colour disjunctively, under all the considerations of adventitious circumstances attendant on nature or art, and indispensable to every artist, who endeavours to reflect nature with truth.

The foregoing observations having been duly weighed, and the mind prepared for representation, I consider it essential to give a system for the manual operation of drawing. A particular mode of action has not, to my knowledge, been laid down or even thought necessary, while, I have every reason to believe, many may attribute their non-success in a great measure to the want of system in handling. It is nothing new to hear of persons whose theory far exceeds their practice, nor is it disputed that it is necessary for musical professors, &c. to have rules for action, handling, fingering, &c. If the hand is not rendered as free as the mind it

serves, genius must labour under restraint. The hand having to guide an instrument, particular attention should be paid to the first introduction, which is usually the pen—which I find necessary to describe. The mode of holding the pen has hitherto been dependant on the caprice or particular genius of the master, rather than on demonstrative rule. Accident only has produced the free penmen, most of whom are unconscious of the cause of their excellence, which, in fact, has resulted from their inadvertently adopting a good method of holding the pen. The late Mr. Langford, whose writing was pre-eminent, laid down in his “*Beauties of Penmanship*,” that the true slope of writing was 54 deg., but assigned no reason. Having noticed the angle of other eminent penmen to differ, I was induced to endeavour to demonstrate it, and after considerable patience, I discovered, that if the individual sits directly before the paper—rests half the arm, from the wrist to the elbow, on the table—rests on the points of the third and little finger, the middle finger straight, the thumb embracing the pen near the nail—the pen passing through the middle of the first joint of the fore-finger, and the

wrist kept an inch off the table—on extending the pen and drawing it to the point of radius, the down stroke produced an angle of 54 deg. ; the angle of the pen, before extended from the point of radius, 65 deg. ; this demonstrated that 54 deg. is the true slope of writing, possessing many advantages (Plate 7, fig. 1). The palm of the hand resting on the table impedes, the fore arm has to be moved, the third and little finger obstruct the other fingers and thumb, which should work as the extended leg of the compasses ; the pen passing otherwise than through the middle joint of the finger, produces acuteness or perpendicularity, and an unequal action on the flexible nibs, both of which ought to act alike. By not keeping up the wrist, the hand often falls off laterally, inclines the pen on the right nib, produces an acute slope and monotonous angularity ; nibs which are cut unequal to accommodate this position cannot be governed. The middle finger if bent, or laid under the pen, and many other defects, which a little observation will point out, plainly prove that agreeable and elegant penmanship depends on position of hand, and that that which is capable of demonstration will hold



good. Popular phraseology properly designates the cause of bad writing by the constantly used epithets—cramp, stiff, awkward, heavy, scratchy, feeble, &c. &c.

Epithets on this, as well as every other art or science, have a reference to physical action, spring spontaneously in society, and their universal and critical application confirms them.

Setting in front of the paper saves the painful and injurious twist, which setting with the left hip towards the table produces, and by this new method the writing will be horizontally straight, and supercedes the necessity of lines. A moderately soft pen should be introduced, that early the hand may be made susceptible of lightness of touch, giving tenderness to the fine strokes, grace in the turns, and firmness in the down strokes.

These suggestions on holding the pen may be considered extraneous in a treatise on drawing, till it is remembered that the pen is first employed to decipher those symbols which are to be the medium of other manual acquirements, that on proper tuition depends the free use, and that at an early age the sphere of the mind is ready for the first

impression, around which every future contrast must be placed, and that the more exact, elegant, and systematic the first section is stamped, the more perfect must be the whole. The first employment of the hand should lay the foundation for autographic taste. Youth, taught by demonstrative rule to be precise, to form parallel letters to a given angle, founded on the construction of the hand, equidistance, beautiful ovality in the curved letters, the graceful serpentine in uniting them, delicacy in the fine and firmness in the thicker strokes, have then reason and rule on which to form their first and generative judgment.

The liberty which is given to the fingers, and the ease with which the pen may be handled, is sufficient to invite the adoption, saying nothing of its mathematical precision, but as most persons apply the wrist, some difficulty may be experienced in adopting a method so opposite to their practice. By way of obviating this inconvenience, a soft cushion, tied round the wrist, will keep the hand right, and remove any inconvenience, till habit no longer requires it; it is well to adopt this course with youth.



The only objection I ever had made to this system was, that every one writing well, the possibility of detecting forgery would be done away ; to which may fairly be answered, that although most persons would write better, there would still be distinctions, from difference of capacity ; if there should arise a prevailing similarity, the autographs of individuals would have a peculiarity which would render forgery equally ready to detect as at present.

The pencil being the second instrument the hand has to guide, pupils find but little difficulty in using it if accustomed to the proper use of the pen. The sensibility, from proper initiation, soon provides for the difference between the flexibility of the pen and the resistance of the pencil ; the master has but little to do to gain the description of touch required, is spared the mortification of futile endeavours, and rapidly leads the delighted genius to the necessary mental study. As in writing, the pupil should sit before his drawing, the pencil should be held as the pen, the paper should not be turned to accommodate the hand, which is not required if the pencil be systematically handled.

As a precise and intuitive method, I lay down as a rule for the practice of pencil drawing, which is the ordinary instrument commenced with in this country, that sitting as I have described, the dexter sloping lines be made with the pencil according to the mode of holding the pen; sinister sloping lines, to carry the arm farther from the body, the wrist elevated, resting on the third and little finger, to draw towards the body; for perpendicular lines, to raise the pencil till it is nearly perpendicular, and passes the second joint of the fore-finger; in making curves, to use the same action; for horizontals, to rest on the knuckle of the little finger, which flattens the hand, and draws the point of the pencil after the hand from left to right. My reason for adopting this principle, will be seen by the following explanation:—Holding the pencil perpendicular for perpendicular and curved forms, and horizontal or sloping for horizontal, is serviceable in itself, merely in reference to making a pencil drawing, according to the aptitude of the hand, and making the hand familiar to the natural method of using the brush, to which the practice of the pencil leads. Using

the camel-hair pencil in the various modifications of lines (to make them agreeably to the will) it must be held perpendicular for perpendicular lines, so also for curves, and the point must be drawn after the hand in horizontals, &c. Consistency in the methods, I trust, is at once seen, and perhaps will explain a surprise often expressed, that some cannot communicate, although they can perform, such persons never having perceived, that their skill depended on a lucky, though unconscious adoption of method; in my practice, when I have found pupils inattentive to my method of holding the pencil, to make the rule familiar, and give the hand freedom, I have made them draw with the camel-hair pencil in seppia, which has invariably been attended with success, and improved their drawing. This resort, besides establishing the principle, has done much to fix the attention; not having the power to rub out, they examine carefully the form or copy before they attempt the imitation, and are therefore the better acquainted with the peculiarities, which is decidedly advantageous to the student. To perceive the method and process of the archetype is the direct road to improvement.

The appearances of pencil under different actions are very manifest. If a free pencil (B) is used, when it is held as inclined to the paper as possible it is pale or mealy ; on every increase of the angle towards the perpendicular, it increases in colour, and loses its granulated cast till it appears crisp, sharp, and black ; these appearances, depending on position, are valuable to know in imitation, to effect our design, and to save useless labour. Those who may commence on these ideas, or those who have not adequately practised drawing, would do well to habit themselves to make perpendiculars, curves, serpentine forms, and horizontals with facility; under every modification of strength, till, without looking at the paper, they may be perfectly sensible of the strength of touch.

To the draftsman geometry is indispensable, to give a just idea of the diversity of form, and a true conception of combined intricacy interwoven in structures ; but as the study may occupy more time than most persons can devote, I have here thought it necessary to adapt so much of it to this work as will serve to assist the student in forming a strict judgment on every form that may be pre-

sented to him. Those whom energy shall crown with success on this course, will readily go further into geometry, perspective, &c., whether professional or actuated by the love of the art.

It is considered, I believe, universally, that the art of taking a likeness is not to be taught, and that therefore it is intuitive; let any one who has not apparently such a genius, pursue indefatigably the study of dimensions, their comparative exactity or difference, the mathematical contents of every form, the knowledge of superficies, assisted by a demonstrative manual practice, and I have not the least doubt, such person would find he had gained, by restrictive method, and much practice, the ability of a genius. Thus a mind held to one pursuit gains a full knowledge; a genius is a voluntary selector of one particular pursuit, and as the full acquirement of any one thing requires so much strictness and time, an universal genius is not to be found.

The following definitions and problems will assist those that select the art as a pursuit, without consulting geometrical works, and if copied, till

thoroughly understood, will promote the proper ideas for imitation :—

A point is that which has position, but no magnitude. (Plate 3, fig. 1.)

A line, is length without thickness. (Plate 3, fig. 2.)

Straight lines are geometrically called right lines.

Lines are either parallel, oblique, perpendicular, or tangential. Lines are either right or curved, or mixed of the two. (Plate 3, figs. 5, 6, 7.)

Parallel lines are always the same distance apart at each extreme, whether straight or curved. (Plate 3, fig. 8.)

Oblique lines, if continued till they meet on the side of the least distance, produce an angle. (Plate 3, fig. 9.)

A perpendicular line inclines not more on one side than on the other, the angles on each side being equal, and are called right angles. (Plate 3, fig. 10.)

A right line, or curve, is tangential, or a tangent to a circle when it touches, without cutting it. (Plate 3, fig. 11.)

Angles. An acute angle is less than a right angle. (Plate 3, fig. 12.)

An obtuse angle is greater than a right angle. (Plate 3, fig. 13.)

An oblique angle is greater or less than a right angle.

A right angle contains 90 deg.

A diagonal line is a right line joining two opposite angles. (Plate 3, fig. 14.)

Superficies are either plane or curved, vulgarly called flat or round.

Plane figures are bounded either by right lines or curves.

Plane figures that are bounded by right lines, have names according to the number of their sides, or of their angles, for they have as many sides as angles, the least number being three, and is called a triangle.

A square has four sides and four angles. (Plate 3, fig. 15.)

A pentagon is a polygon of five sides ; a hexagon hath six sides ; a heptagon seven ; an octagon eight ; a nonagon nine ; a decagon ten, &c. &c. These various superficies are called regular when



all the sides are equal, and irregular figures when the sides differ in length.

A circle is a plane figure bounded by a curve line, called the circumference, which is every where equidistant from a certain point within, called the centre.

The circumference of every circle is supposed to be divided into three hundred and sixty equal parts called degrees, and each degree into 60 minutes, &c. Hence a semi-circle contains 180 deg., and a quadrant, or quarter of a circle, 90 degrees.

The radius of a circle is a right line drawn from the centre to the circumference. (A B, plate 8.)

The diameter is a right line drawn through the centre, and terminating in the circumference on both sides.

An arc of a circle is any part of the circumference. (Plate 3, fig. 16.)

A chord is a right line joining the extremities of an arc. (Plate 3, fig. 16.)

A segment is any part of a circle bounded by an arc and its chord. (Plate 3, fig. 16.)

The height, or altitude of a figure, is a per-



pendicular let fall from an angle, or its vertex to the opposite side, called the base. (Plate 3, fig. 17.)

When an angle is denoted by three letters, that which stands at the angular point is read in the middle. (Plate 3, fig. 18.)

The measure of a right-lined angle is the arc of any circle contained between the two lines which form the angle, the angular point being the centre, and it is estimated by the number of degrees in that arc. (Plate 3, fig. 19.)

A right-lined figure is inscribed in a circle when all the angular points of the figure are in the circumference of the circle. (Plate 3, fig. 20.)

A right-lined figure circumscribes a circle, or the circle is inscribed in it, when all the sides touch the circumference. (Plate 3, fig. 21.)

Similar figures are those that have all the angles, or all the diameters, equal the one to the other.

A regular solid figure has equal length, breadth, and thickness. (Plate 3, fig. 4.)

Circular solids, or superficies, which are not strictly round, partake of ovality, and are sometimes called elliptical.

To render the study of these preliminary definitions practically serviceable to the art, it will be necessary for those, who are not already acquainted with the scale, to practice the scale of chords; *viz.*—take a pair of compasses, with the pencil substituted for one of the legs, set the steel point of the other leg on the commencement of the scale of chords, and extend the pencil point exactly to where you see 60 marked on it; with this length as a radius, describe a circle; rule a right or straight line through the centre, then extend the compasses to 90, as marked on the scale; set the steel point on the circumference, where the line, as a diameter, cuts it, and mark with the pencil point the precise length of the 90 deg. on the circle; then draw a line from this spot through the centre (perpendicular to the diameter) to the opposite side of the circumference, and it will divide the circle into four equal parts, each part containing 90 deg.

It must be remarked, that the size of the circle makes no difference to the number of degrees (Plate 8, fig. 1), three hundred and sixty being the division fixed to calculate on, and the radii equally dividing small or large circles; which also

will explain, that a right angle contains 90 deg.—as two diameters, or right lines, drawn the one perpendicular to the other, cut the circumference, or 360 deg., into four equal parts of 90 deg. each.

On scales, contained in cases of mathematical instruments, there is set down a scale of chords (Plate 8, fig. 2), marked Cho. or c, from 1 to 90 deg., by divisions of 10 deg., each decreasing in length, which are formed by dividing the quarter of any circumference into nine equal parts, and drawing a straight line from the beginning to each of the nine divisions; the measure of each of those lines are set down, which forms the scale of chords (Plate 8, fig. 3); 60 deg. being taken as a radius to describe the circle, and the 90 deg. on the scale will be the quarter of it. The larger or smaller the quarter circle, the larger or smaller will be the scale of chords, and in setting them out for practical use, it is necessary to be very exact.

Having proceeded thus far, it will be necessary to practise the following problems, describing the circles by the radius 60, from the scale where a circumference, or an arc, is required.

## PROBLEM I. PLATE IV.

*To bisect, or divide, a given line A B into two equal parts.*

From the two extremes (as centres) A and B, with the radius sixty, describe arcs of circles, intersecting each other in C and D; draw the line C D, which will bisect the given line A B in the point E.

## PROBLEM II. PLATE IV.

*To bisect a given angle B A C.*

From the centre A, with the radius, describe an arc, cutting off the equal lines A D, A E; and from the two centres D E, with the same radius, describe arcs, intersecting in F, then draw A F, which will bisect the angle A as required.

## PROBLEM III. PLATE IV.

*At a given point C, in a given line A B, to erect a perpendicular.*

From the given point C, cut off any equal parts, C D, C E, and from those points D and E, as centres, with any one radius, describe arcs, intersecting in F,

then join  $c f$ , which will be the perpendicular required.

PROBLEM III.\* PLATE IV.

*Or, when the given point  $c$  is near the end of the line.*

From a point  $d$ , assumed above the line, as a centre, through the given point  $c$ , describe a circle, cutting the given line at  $e$ , and through  $e$  and the centre  $d$ , draw the diameter  $e d f$ , then join  $c f$ , which will be the perpendicular.

PROBLEM IV. PLATE IV.

*From a given point  $A$ , to let fall a perpendicular on a given line  $BC$ .*

From the point  $A$  as a centre, with any convenient radius describe an arc, cutting the given line at the two points  $D$  and  $E$ ; and from the two centres  $D$  and  $E$ , with any radius, describe two arcs, intersecting at  $F$ , then draw  $A G F$ , which will be perpendicular to  $BC$ , as required.

## PROBLEM IV.\* PLATE IV.

*Otherwise, when the given point is near at the end of the line.*

From any point  $D$ , in the given line  $BC$ , describe the arc of a circle, through the given point  $A$ , cutting  $BC$  in  $E$ , and from the centre  $E$ , with the radius  $EA$ , describe another arc, cutting the former in  $F$ , then draw  $AGF$ , which will be perpendicular to  $BC$ , as required.

## PROBLEM V. PLATE IV.

*At a point  $A$ , in a given line  $AB$ , to make an angle, equal to a given angle  $C$ .*

From the centres  $A$  and  $C$ , with any one radius, describe the arcs  $DE$ ,  $FG$ , then, with the centre  $F$ , and radius  $DE$ , describe an arc, cutting  $GF$  in  $G$ ; through  $G$ , draw the line  $AG$ , and it will form the angle required.

## PROBLEM VI. PLATE IV.

*Through a given point  $A$ , to draw a line parallel to a given line  $BC$ .*

From the point  $A$ , draw the line  $AD$  to any point

in the line  $BC$ ; then draw the line  $EAF$ , making the angle at  $A$  equal to the angle at  $D$  (as Problem V.), so shall  $EF$  be parallel to  $BC$  as required.

### PROBLEM VII. PLATE IV.

*To divide any line  $AB$ , into any proposed number of equal parts.*

Draw any other line,  $AC$ , forming an angle with the line  $AB$ , on which set off as many equal parts  $AD, DE, EF, FC$ , as the line  $AB$  is to be divided into, join  $BC$ , parallel to which, draw the other lines,  $FG, EH, DI$ , which will divide  $AB$  in the manner required.

### PROBLEM VIII. PLATE IV.

*To find a third proportional to two given lines*

$AB, AC$ .

Place the two lines  $AB$  and  $AC$ , forming any angle at  $A$ , and in  $AB$ , take also  $AD$ , equal to  $AC$ , join  $BC$ , and draw  $DE$  parallel to it, so will  $AE$  be the third proportional sought.

## PROBLEM IX. PLATE IV.

*To find a fourth proportional to three given lines*  
*A B, A C, A D.*

Place the lines A B, A C, making any angle at A ; also place A D on A B, join B C, and parallel to it, draw D E, so shall A E be the fourth proportional as required.

## PROBLEM X. PLATE IV.

*To find a mean proportional between two given lines* A B, B C.

Place A B, B C, joined in one straight line, which bisect in the point o ; then, with the centre o, and radius o A or o C, describe the semicircle A D C, to meet which, erect the perpendicular B D, and it will be the proportional sought between A B and B C.

## PROBLEM XI. PLATE IV.

*To find the centre of a circle.*

Draw any chord A B, bisect it perpendicularly with the line C D, which will be a diameter, therefore, C D bisected in o, will give the centre required.



## PROBLEM XII. PLATE IV.

*To describe the circumference of a circle through three given points A B C.*

From the middle point B, draw chords B A, B C, to the two other points, and bisect these chords perpendicularly by lines meeting in o, which will be the centre; then from the centre o, at the distance of any one of the points, as o A, describe a circle, and it will pass through the two other points B C as required.

## PROBLEM XIII. PLATE IV.

*To draw a tangent to a given circle through a given point A.*

When the given point A is in the circumference of the circle, join A and the centre o, perpendicular to which draw B A C, and it will be the tangent.

But, when the given point A is out of the circle, draw A o to the centre o, on which, as a diameter, describe a semicircle, cutting the circumference in D, through which draw B A D C, which will be the tangent required. (Problem XIII.\*, Plate 5.)

## PROBLEM XIV. PLATE V.

*Upon a given line A B to describe a segment of a circle, that may contain a given angle c.*

At the ends of the given line make angles  $\angle DAB$ ,  $\angle DBA$ , each equal to the given angle  $c$ , then draw  $AE$ ,  $BE$ , perpendicular to  $AD$ ,  $BD$ , and with the centre  $E$ , and radius  $EA$  or  $EB$ , describe a circle, so shall  $AFB$  be the segment required, as any angle  $F$  made in it, will be equal to the given angle  $c$ .

## PROBLEM XV. PLATE V.

*To cut off a segment from a given circle, that shall contain a given angle c.*

Draw any tangent  $AB$  to the given circle, and a chord  $AD$ , to make the angle  $\angle DAB$  equal to the given angle  $c$ , then  $DEA$  will be the segment required, any angle  $E$  made in it being equal to the given angle  $c$ .

## PROBLEM XVI. PLATE V.

*To make an equilateral triangle on a given line  $AB$ .*

From the centres  $A$  and  $B$ , with the distance  $AB$ , describe arcs, intersecting in  $C$ , draw  $AC$ ,  $BC$ , and  $ABC$  will be the equilateral triangle.

## PROBLEM XVII. PLATE V.

*To make a triangle with three given lines*

$AB$ ,  $AC$ ,  $BC$ .

With the centre  $A$ , and distance  $AC$ , describe an arc. With the centre  $B$ , and distance  $BC$ , describe another arc, cutting the former in  $C$ , draw  $AC$ ,  $BC$ , and  $ABC$  will be the triangle required.

## PROBLEM XVIII. PLATE V.

*To make a square on a given line  $AB$ .*

Raise  $AD$ ,  $BC$ , each perpendicular, and equal to  $AB$ , and join  $DC$ , so shall  $ABCD$  be the square sought.

## PROBLEM XIX. PLATE V.

*To make a rectangle or parallelogram of a given length and breadth,  $AB$ ,  $BC$ .*

Erect  $AD$ ,  $BC$ , perpendicular to  $AB$ , and each equal to  $BC$ , then join  $DC$ .

## PROBLEM XX. PLATE V.

*To inscribe a circle in a given triangle A B C.*

Bisect the angles at A and B (as Problem II.), with the lines A F, B G, where they intersect at D with the radius D E, describe the circle required.

## PROBLEM XXI. PLATE V.

*To circumscribe a circle about a triangle A B C.*

Bisect any two sides with two perpendiculars, D E, D F, D G, and where they intersect at D will be the centre, then with D B describe the circle.

## PROBLEM XXII. PLATE V.

*To inscribe an equilateral triangle in a given circle.*

Through the centre c, draw any diameter A B; from the point B as a centre, with the radius B C, of the given circle, describe an arc D C E; join A D, A E, and A D E is the equilateral triangle sought.

## PROBLEM XXIII. PLATE V.

*To inscribe a square in a given circle.*

Draw two diameters A C, B D, crossing at right

angles in the centre  $E$  (that is, perpendicularly the one to the other), then join the four extremities  $A B C D$  with right lines, and these will form the inscribed square,  $A B C D$ .

#### PROBLEM XXIV. PLATE V.

*To circumscribe a square about a circle.*

Draw two diameters  $A C$ ,  $B D$ , crossing at right angles in the centre  $E$ , then, through the four extremities of them, draw  $F G$ ,  $I H$ , parallel to  $A C$  and  $F I$ ,  $G H$ , parallel to  $B D$ , and they will form the square  $F G H I$ .

#### PROBLEM XXV. PLATE V.

*Or, to inscribe a circle in a given square.*

Bisect the two sides  $F G$ ,  $F I$ , in the points  $A$  and  $B$ , then, through these two points, draw  $A C$  parallel to  $F G$  or  $I H$ , and  $B D$  parallel to  $F I$  or  $G H$ , then the intersection  $E$  will be the centre, and  $E A$  the radius of the inscribed circle.

#### PROBLEM XXVI. PLATE V.

*To circumscribe a circle about a given square.*

Draw the diagonals  $A C$ ,  $B D$ , and their intersection  $E$  will be the centre.

## PROBLEM XXVII. PLATE V.

*To cut a line in extreme and mean proportion.*

Let  $AB$  be the given line to be divided in extreme and mean ratio, that is, so as that the whole line may be to the greater part, as the greater part is to the lesser part.

Draw  $BC$  perpendicular to  $AB$  and equal to half  $AB$ , join  $AC$ , and with the centre  $C$ , and distance  $CB$ , describe the circle  $CBD$ , then with the centre  $A$ , and distance  $AD$ , describe the arc  $DE$ ; so shall  $AB$  be divided in  $E$  in extreme and mean ratio, that is,  $AB$  is to  $AE$  as  $AE$  is to  $EB$ .

## PROBLEM XXVIII. PLATE V.

*To inscribe an isosceles triangle in a given circle, that shall have each of the angles at the base double the angle at the vertex.*

Draw any diameter  $AB$  of the given circle, and divide the radius  $CB$  in the point  $D$  in extreme and mean ratio by the last problem; from the point  $B$  apply the chords  $BE$ ,  $BF$ , each equal to  $CD$ , then join  $AE$ ,  $AF$ ,  $EF$ , and  $AEF$  will be the triangle required. For through the three points  $CDF$ , describe the circle  $CDF$ , and draw the lines  $CF$ ,  $DF$ .

## PROBLEM XXIX. PLATE VI.

*To inscribe a regular pentagon in a given circle.*

Inscribe the isosceles triangles  $ABC$ , having each of the angles  $ABC$ ,  $ACB$ , double the angle  $BAC$ .

Then bisect the arcs  $ADB$ ,  $AEC$ , in the points  $DE$ , and draw the chords  $AD$ ,  $DB$ ,  $AE$ ,  $EC$ . So shall  $ADBE$  be the inscribed equilateral pentagon required.

## PROBLEM XXX. PLATE VI.

*To inscribe a regular hexagon in a given circle.*

Apply the radius (60 deg.) of the given circle  $AO$ . As chords  $AB$ ,  $BC$ ,  $CD$ ,  $DE$ ,  $EF$ ,  $FA$ , which will describe the regular hexagon.

## PROBLEM XXXI. PLATE VI.

*To describe a regular pentagon or hexagon about a given circle.*

In the circle, inscribe a regular polygon of the same name or number of sides, as  $ABCDE$ , by one of the foregoing problems. Then to all the angular points of it draw tangents (by Problem XIII. Plate 4.) and these will form the circumscribing polygon required.

## PROBLEM XXXII. PLATE VI.

*To inscribe a circle in a regular polygon.*

Bisect any two sides of the polygon, by the perpendicular  $GO$ ,  $FO$ , and their intersection  $O$  will be the centre of the inscribed circle, and  $OG$ , or  $OF$ , will be the radius.

## PROBLEM XXXIII. PLATE VI.

Bisect any two of the angles  $C$  and  $D$  with the lines  $CO$ ,  $DO$ , then their intersection  $O$  will be the centre of the circumscribing circle, and  $OC$ , or  $OD$ , the radius.

## PROBLEM XXXIV. PLATE VI.

*To make a square equal to the sum of two given squares.*

Let  $AB$  and  $AC$  be the sides of the two given squares. Draw two indefinite lines  $AP$ ,  $AQ$ , at right angles to each other, in which, place  $AB$ ,  $AC$ , of the given squares, join  $BC$ ; then a square described on  $BC$  will be equal to the sum of the two squares described on  $AB$ ,  $AC$ .



## PROBLEM XXXV. PLATE VI.

*To make a square equal to the difference of two given squares.*

Let  $AB$  and  $AC$ , taken in the same straight line, be equal to the sides of the two given squares. From the centre  $A$ , with the distance  $AB$ , describe a circle, and make  $CD$  perpendicular to  $AB$ , meeting the circumference in  $D$ . So shall a square described on  $CD$  be equal to  $AD^2$ ,  $AC^2$ , or  $AB^2 - AC^2$ , as required.

## PROBLEM XXXVI. PLATE VI.

*To make a triangle equal to a given quadrilateral*  
 $ABCD$ .

Draw the diagonal  $AC$ , and parallel to it  $DE$  meeting  $BA$ , produced at  $E$ , and join  $CE$ ; then will the triangle  $CEB$  be equal to the given quadrilateral  $ABCD$ . For the two triangles,  $ACE$ ,  $ACD$ , being on the same base  $AC$ , and between the same parallels  $AC$ ,  $DE$ , are equal; therefore if  $ABC$  be added to each,  $BCE$  will be equal to  $ABCD$ .

## PROBLEM XXXVII. PLATE VI.

*To make a triangle equal to a given pentagon,*  
 A B C D E.

Draw D A and D B, and also E F, C G, parallel to them, meeting A B, produced at F and G; then draw D F and D G; so shall the triangle D F G be equal to the given pentagon A B C D E.

## PROBLEM XXXVIII. PLATE VI.

*To make a rectangle equal to a given triangle,*  
 A B C.

Bisect the base A B in D; then raise D E and B F perpendicular to A B, and meeting C F, parallel to A B at E and F. So shall D F be the rectangle equal to the given triangle A B C.

## PROBLEM XXXIX. PLATE VI.

*To make a square equal to a given rectangle,*  
 A B C D.

Produce one side, A B, till B E be equal to the other side, B C. On A E, as a diameter, describe a circle, meeting B C, produced at F; then will B F

be the side of the square  $BFGH$ , equal to the given rectangle  $BD$ , as required.

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Having studied the definitions and problems as here laid down, to give them practical utility in the art, the measurement of angles and circumferences must be acquired.

If a right line stands upon another right line, and makes an angle with it, the two angles taken together, will be two right angles.

Let the line  $CD$  meet  $AB$  in  $D$ ;—on  $D$  erect the perpendicular  $DE$ . With the chord of 60 deg. in your compasses, with one foot in  $D$  describe the arc  $AEB$  which will be a semicircle or 180 deg., of which  $AB$  is the diameter, and the angles  $ADE$  and  $BDE$  are quadrants, each 90 deg., because  $ED$  is perpendicular to  $AB$ ;—now the angle  $BDC$  is less than 90 deg., (say 50 deg.), and if subtracted from  $AEB$  (180 deg.) will leave 130 deg.; that is, the angle  $ADC$ . Or if the angle  $BDC$  (50 deg.) be subtracted from the right angle  $BDE$  (90 deg.) it will leave  $CDE$  (40 deg.) (Plate 3, fig. 22.)

If two right lines cross each other, the angles

which are opposite are equal one to the other. (Plate 3, fig. 23.)

If a right line  $EF$  cross two parallel lines  $AB$ ,  $CD$ , the outward angles will be each equal to the inward and opposite ones. (Plate 3, fig. 24.)

In the triangle (Plate 3, fig. 25,)  $AGB$ , draw  $CD$  parallel to  $AB$  through the point  $G$ , on which point, with the chord of 60 deg., describe a circle; and with the same radius on  $A$  and  $B$  describe arcs; now by the last proposition the angle  $AGB$  will be equal to  $FGE$ , and the angle  $DBG$  will be equal to  $CGE$ , and the angle  $GCA$  is equal to the angle  $DGF$ . Now since the opposite angles are equal, the angles  $DGF$ ,  $FGE$ , and  $EGC$ , together make a semicircle, or 180 deg.; therefore it is plain, that the *three* angles of a plane triangle, whether *right*, *acute*, or *obtuse*, TOGETHER are equal to two right angles, or 180 deg.: hence it follows, that as the right angle (fig. 26.)  $BAG$  is 90 deg., the two acute angles  $ABG$  and  $AGB$  taken together can be no more than 90 deg.; therefore if one of the acute angles in a right angled triangle be given (*i. e.* known) the other is found by subtracting the given angle from 90 deg. as every right angled triangle contains 90 deg.

And in any oblique angled triangle, if one of the angles be given, the sum of the other two is found by subtracting the known angle from 180 deg.; or if two of the angles are given, the third is found by subtracting them from 180 deg.

In every plane triangle if one of the sides be produced, the outward angle will be equal to the two inward opposite angles. (Prob. XXVII. Plate 3.)

Let  $ABC$  be the triangle, and  $CD$  the side produced; with the chord of 60 deg. describe arcs on  $AB$  and  $C$ , draw  $CE$  parallel to  $AB$ , then, by the third proposition, the angle  $ACE$  must be equal to the angle  $BAC$ , and the angle  $DCE$  equal to  $CBA$ , —therefore the outward angle  $DCA$  is equal to the two inward opposite angles  $ACB$  and  $BAC$ , which may be easily proved by measuring the angles by the line of chords on the plane scale.

In plane and oblique trigonometry these preliminaries are followed by axioms and cases, which treat of sines, secants, tangents, the measurements of lines, &c., and may be consulted by those who are desirous of further mathematical knowledge, but the limits of this treatise will not allow the whole to be introduced.

In plane triangles the sides are in direct proportion to the sines of their opposite angles. *Example.*—In an equilateral triangle, each of the three angles will contain 60 deg., and the sides will be of equal length. In oblique triangles the sines of the angles are in direct proportion to the sides. As angles are measured by arcs of circles, it may be well to recommend the study of the circle, as relates to the measurement of the contents of its area, the radius, circumference, &c. by which are found the contents of irregular figures, &c. These portions may be studied from mathematical works, and require only a little application to become master of. They may not be directly applicable to the arts, but the artist must be able the better to dispose his lines and curves, who has this relative knowledge of the invariable principles which govern forms.

Those who make drawing a study will in the foregoing problems, &c. find the rudiments of the art, and the means of comprehending the intricacies of design. In the course of tuition, if we speak of angles, curves, degrees, &c. &c. and are not comprehended, so much time is not only lost, but the

misconception may mislead or confuse the ideas. It is, therefore, to give a just idea of the basis of mathematics and the art, that I have introduced it by which alone we can have a right notion of every thing that possesses form—Geometry has an immediate relation to form, motion, &c.; for it is by the fiction of lines, objects and the *course* of them are understood and communicated to others; for instance:—the orbit of the earth is imagined in space and defined by a circle, objects at a distance are received into the vision, and the direction of those objects are pointed out by lines, to represent the visual rays. We imagine the centre of a solid square, or sphere, which is defined by lines. It is to give justness and precision to our ideas, that the definitions and problems are here laid down and enjoined, that by them we may give idea—figure, the forms of nature—accuracy and demonstration. Without this, too much rests on opinion, which it is so natural for every one to hold to, but which dissipates when science is called in as arbiter.

The human figure has always been the desideratum of drawing; the delineation of it has always

been prized, and the attainment, in an eminent degree, the lot of but few.

It is usual to direct the student to imagine (particularly on the face) the angle that one feature makes with the other, to impart accuracy to the representation. But as the various parts are not composed of right lines, it is long before the conception can be gained.

As the lines which compose the outline of the features and figure have a subtile variety of curvature, it is my design first to give a definition of the arcs of circles which compose that variety, and then a few diagrams of the eye, nose, and mouth, and in combination, on the head of the Niobe. (Frontispiece.)

The principle manifesting itself, it may not be necessary to produce more examples. The arduous pupil will readily adapt it to subjects suited to his genius, and be rewarded by the exercise of the imagination.

The convolution of circles, I apprehend, may facilitate and lead to a nicer discrimination of subtile inflections which are in every figure, and differ in each, which, with the assistance of angles only



the pupil is apt to neglect, and for the want of some demonstrative guide, never sees them, nor knows the necessity of searching for them.

Plate 7, fig. 2.—Exhibits a waving line formed by the arcs of convolving circles, by which it will be readily conceived, that the slightest deviation from a right line forms the arc of a circle of a considerable radius, and on a ratio of increase of curvature there is a proportioned diminution of radius.

As on the quantity and variety of curvature depends the beauty of human perfection, it is of the utmost importance the mind should be acquainted with the radical construction of those lines which are employed to represent it.

Plate 7, fig. 3.—Represents the diagonal curvature of a well-formed eye, the lids of which govern the peculiarities of the collapsing of the upper lid, and the muscular fulness or scantiness of the lower one.

Plate 7, fig. 4.—Calls the attention to the arcs which compose the intricate curves of the nose.

Plates 7 and 8, fig. 5.—Describes the closed mouth. This feature having the greatest motion of any of the features, and giving animation to the

whole countenance, should be examined and reduced to diagrams, till its infinite changes can be understood.

Plate 2.—Exhibits the facial line and facial contour of the Niobe by curves.

Frontispiece.—The full face, by which it will be seen the inner mutual semicircles give the facial contour, which being divided by two horizontal lines into three parts, and perpendicularly into five equal parts, sets the place of the features—on the upper line which divides the third and lowest division of the face, with the same radius describe the lower circle which passes through the extremities of the eyes, and the pit of the throat; and at the same distance from the intersecting facial circles on the forehead describe a circle, which gives the contour of the cranium. Above the head is the five divisions of the face, the division of the length of the eye into three equal parts for the iris, and the equal third division of the iris to form the pupil, &c.

COLOURS.

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THE proper colours to be used in miniature painting are always difficult to be ascertained by beginners. There are so many colours made, that the selection often leads to many difficulties. Being unacquainted with the opaque, demi-opaque, semi-transparent, or transparent quality of each, and working them indiscriminately together; early productions generally want brilliancy and clearness.

It will, therefore, be necessary to learn the quality of each colour, that the proper use and compounding of them may be done by calculation, and not by chance. Artists do not confine themselves to the use of any given colours, but deviate at pleasure, which skill and experience enables them to do. The beginner must be satisfied with using them by rule, till practice has given him a complete command, when he may speculate, agreeably to his genius and style. Many persons

boast they only use three colours, blue, red, and yellow. I consider it pedantic, there being properties in various colours, which cannot be produced by one sort of blue, red, and yellow. Taking every sort of blue, red, and yellow, absorptions and combinations can be produced by them, which cannot be effected by colours compounded of only one of each sort.

An exclusive and limited selection of colours is like enthusiasm, a sure mark of an illiberal and confined judgment.

INDIGO.—Is a fine opaque colour. It dilutes and washes freely, compounds agreeably, either with opaque or transparent colours, and is considered durable. When worked over unfriendly colours, it sometimes turns black, but it is not the fault of the colour, if unadulterated, but its unfriendly union ; when this change is perceived, the cause should be ascertained, and avoided on another occasion.

PRUSSIAN BLUE.—Is a transparent colour ; possesses but little body, and is seldom used in miniature painting. Opaque, or demi-opaque, colours overpower it in combination. Gamboge, or equally

transparent colours mixed with it, make transparent tints only fit for flower-painting. It is considered to fade.

**COBALT.**—Is a fine opaque colour. It is mealy or chalky, and does not spread freely. Repetitions without caution will disturb the first colour. If used in the flesh it has a bad effect, if the picture be inspected by candle-light, causing a purple muddiness, especially if used in the finishing. It does not mix well with opaque colours; semi-transparent colours compound best with it.

**ULTRAMARINE.** — A very fine opaque blue. When good, it is durable, and, like Cobalt, is mealy, and requires care, as it does not wash well. Compounding it with other colours destroys its brilliancy. It is best worked by itself, and is very useful to reduce redness, by working over that part without gum. If used in compound, it must be with semi-transparent colours, such as Vandyke brown, &c. In fair complexions, and females, it is a preferable colour.

**VERDITER.**—Is more chalky than Ultramarine, or Cobalt; may be used to reduce redness, and in draperies.

When forming part of a tint, and is floated, it separates, especially from opaque colours like Indian red, &c. These three last-mentioned colours require more gum than other colours, on account of their mealy, or chalky property.

**INDIAN RED.**—Is a very fine opaque colour; it compounds with the flesh-tints, works clean, and associates well. It is friendly with blues, reds, or yellows, and may be used to great advantage, both in the flesh and opaque colours.

**VENETIAN RED.**—A fine local flesh tint; it is semi-transparent, partially yellow and red. It washes freely, and compounds with most colours. This colour nearly obviates the use of yellow in the flesh, and forms a part of the commencement, or finish, of the miniature, or both. It is preferable to light-red, on account of its yellowness and general friendly association.

**MADDER LAKE.**—Rather mealy, and a demi-opaque colour; requires some care in washing, with rather more gum than semi-transparent colours. It unites with blues, reds, and yellows, and is a very useful colour in the flesh. It is considered durable.

**CARMINE.**—Is a fine bright colour, but little used in the flesh. It works freely, compounds well, but is not considered durable. It is used mostly in back-grounds and draperies.

**VERMILLION.**—Is an opaque colour, but with gum works freely, uniting with lakes and yellows kindly, but forms a disagreeable tint with blues. It is a colour to be used with caution, and sparingly by beginners, lest it over-power and spoil their work. It is, however, a good colour, used with skill, both for the flesh and for draperies.

**LAKES.**—Are chiefly used on draperies.

**RED LEAD.**—Seldom used, or then only on draperies.

**INDIAN YELLOW.**—A fine demi-opaque colour; is very agreeable to use, and compounds with opaque or transparent colours; is but little used in the flesh, except in tints. It is used for draperies, ornaments, &c.

**GAMBOGE.**—Is seldom, and then sparingly, used in the flesh. Gamboge dissolved in water, the water poured off, and repeated till the gum is perfectly extracted, leaves a fine opaque yellow for body colours.



CROME AND KING'S YELLOW.—Are used for draperies, &c. only, being opaque.

ROMAN OCHRE.—An opaque colour, useful in body colour.

MADDER BROWN.—A very fine colour for miniatures, either for working alone, or in tints. It combines with yellows, blues, and reds; it is semi-transparent, and durable.

BURNT SIENNA.—A fine transparent colour; useful in combinations, hair, or back-grounds, but seldom used in the flesh.

SEPIA.—A semi-transparent free colour for hair, eye-brows, draperies, and compounding a variety of brown tints. Gamboge, Vandyke brown, or burnt sienna, worked with it, or over it, in considerable strength, convert it to a jet black, and glazed.

INTENSE BROWN.—A colour of great body, demi-opaque, and clogs without care; it compounds with the flesh-tints, and draperies. Used alone, it has great richness for powerful strengths of shadow.

VANDYKE BROWN.—A clean semi-transparent colour for flesh-tints, and in compounding tints.



It produces a beautiful green tone when worked over parts manifestly too blue.

LAMP BLACK.—An opaque colour. When united with other colours, they should not be opaque, unless it be to be used as body-colour ; its looseness requires to be held together by the more gummy or transparent colours.

CONSTANT WHITE.—Is used only in draperies, body-colour, and visual ray, or spot of light on the eye-balls. It is sometimes introduced on the tip of the nose, but I consider it defective taste ; its opacity ill-according with the transparent colour on the face, the ivory being sufficiently white.

There are a great number of greens, browns, and other compound colours sold. All that are necessary I have enumerated, and will compound the tone of many of those not mentioned.

#### TINTS

*Composed from the above-mentioned colours used in the Flesh, Draperies, Background, &c.*

INDIGO, WITH INDIAN RED.—Forms a fine opaque pearly colour. With more or less of either

a variety of tints for the features, back-ground, drapery, &c. When composed with but little water, they work as body-colour, and lie remarkably flat. With indigo it does not separate in wash, but it does with the other blues, on account of their transparent and less opaque or heavy quality.

INDIGO WITH VENETIAN RED.—A fine grey demi-opaque tint, partially green; it meets the carnations, yellows, &c. without dirtying them, and forms a useful tint, to combine opposing colours, and to finish with.

INDIGO, VENETIAN RED, and INDIAN RED.—A fine warm tint, which harmonizes with the two compounds above-mentioned.

INDIGO, VENETIAN RED, INDIAN RED, AND Madder Lake.—A still warmer tint carries on the gradations of the above shadow-colours, all of which harmonize and form an infinite diversity of tones, clean and agreeable in themselves, and calculated to support the other processes in the painting.

INDIGO, WITH Madder Lake.—A fine purple, useful by itself, and to restore pearliness where parts have inadvertently sunk in effect.

INDIGO, WITH MADDER BROWN.—As pearly a tone as can be desired; useful in all complexions, linen, draperies, and as a neutral-colour to lower the whiteness of the ivory, before the colour of the back-ground is entered. It is a tint which seldom deceives an artist by contrasts altering its hue, in which case a trifling increase of the one or the other of its component parts restores the original intention.

COBALT, OR ULTRAMARINE.—Used with these colours, instead of indigo, produce a paler tint, more of them must be used than indigo, as they are not so strong, neither do they work so agreeably. They are colours that lose by mixing, and are best worked alone, to change a tint.

ULTRAMARINE, WITH VANDYKE BROWN. — Preserves most of its quality, forming a beautiful green in the shadows of the face; it is, however, best to work tints rather blue, and work the Ultramarine over, when we design to produce this tone; indeed, it is best to gain such a knowledge of colour, that colours may be worked separately over each other to produce tints, as if mixed and applied in compound. The combination of colour

over colour produces one tint, which, on close inspection, discovers an infinite variety. It is true to nature, whether we consider the flesh, drapery, or accessories.

**CARMINE AND LAMP BLACK.**—Make a variety of fine tints. Some artists use them for outline and first shadows. If skilfully supported by the finishing, they are a very fine mixture for the shadows of flesh, and shadow-colour for red draperies.

**MADDER LAKE AND INDIAN YELLOW, or GAMBOGE.**—Make a vermillion tint, where the opacity of vermillion is not required.

**MADDER LAKE AND VENETIAN RED.**—Make a less brilliant tint; a good graduating colour towards the shades.

**MADDER LAKE AND VANDYKE BROWN.**—A still less brilliant colour, carried still lower with madder brown, and that lowered by intense brown. Keeping up in the ideas a gradual decrease of brilliancy, still using a portion of the original tint, which, finding its own quality associates, might be lost by changing the base of the compound. This system should regulate our ideas, generally, on our painting; and if compelled to change the tint, the

colour, that we are about to add, should be fully ascertained will agree with it.

**MADDER LAKE AND SEPPIA.**—Compounded with a gradual increase of seppia, form a variety of tints which work freely.

**SEPPIA, INDIAN YELLOW, AND LAKE.**—A superior mixture for back-grounds, hair, and drapery. By varying the quantities of each, every shade of brown may be composed from the palest drab to the richest brown. They will produce the colour for light hair, which neither partakes of yellowness nor redness. The seppia and yellow produce a green tint; the introduction of lake takes off the greenness, and changes it to a brown. Indian yellow and lake, with a small portion of seppia—a burnt sienna tint, and in some instances, more agreeable to use. The gumminess of burnt sienna being apt to combine with tints previously down, particularly with seppia, and instead of producing the tone required, converts it into a jet glazed black.

**LAMP BLACK, GAMBOGE, AND LAKE.**—Produce similar tints to the above. Burnt sienna may be introduced, which, with the gamboge, counteracts the looseness of the lamp black. It works remark-

ably flat and solid, and in some instances, is superior to the other mixture. A little blue worked over produces an agreeable tint. It may be used for all the purposes of seppia, Indian yellow, and lake.

LAMP BLACK AND VANDYKE BROWN.—Form a cool brown seppia. Indigo and lake, a still colder brown, approaching a black.

INDIGO AND INTENSE BROWN.—A black, if slightly diluted; if further diluted, it can be reduced to the last tint.

INDIGO AND BURNT SIENNA.—Compose a fine rich green. Is better than sap-green, not being so gummy and transparent, and can be varied between the blue and sienna.

If floated too heavily on a back-ground, the colour settles in the more fluid parts, dries very dense, and when worked upon, goes black. Vandyke brown, gamboge, or any glazing colour, worked on the surfaces, which have dense settled portions of colour, will have the same effect. The only way to obviate it, is to work over demi-opaque or semi-transparent colours, after levelling the lesser dense portions.

INDIGO AND INDIAN YELLOW, OR GAMBOGE.—

Produce demi-opaque, or semi-transparent green, which, with the introduction of lake, a variety of olive tints.

Tints for white drapery cannot be described under a general mixture, as they require considerable skill and delicacy to adapt them so as to harmonize with the rest of the picture, on which the treatment entirely depends. As local tints, it may be generally specified, where the linen is opposed to black or pearl, a tint of indigo and madder brown may be used, when the accessories are light or grey ; Indigo and Venetian red, or ultramarine and Vandyke brown, or greys, which will associate and look clean. The reflection and effects produced by the flesh, or drapery under it, studied and skilfully performed, give it all its value; which must be the result of practice.

#### OPAQUE TINTS

Require good management, neatness, boldness in applying the colour, the proper portion of gum, and care in not taking up the colour, by repeating upon it before the first application is fixed. The introduction of opaque colours where transparent



will effect the purpose, is always to be reprobated. In copies from the old masters, and deeply coloured pictures, opaque grounds are desirable, as they closely resemble oil, provided the rest of the subject be equally rich and solidly painted. Some draperies, particularly woollen, are best in opaque colour, though I have seen good pictures without the use of it. White should only be introduced in those opaque tints which cannot be produced without it, as it does not unite so agreeably as the colours.

Indigo and Indian red form a fine opaque rich ground, and, with a considerable quantity of Roman ochre, fine olives.

Indian red and Roman ochre form rich burnt sienna tints; adding lamp black, brown tints.

Indigo, with Roman ochre, crome yellow, king's yellow, or Indian yellow, form greens; changed by Indian red or lamp black.

Vermillion is a body-colour, deepened with lake, or Indian red, and further lowered with lamp black. These colours are lightened by the further introducing of white, but in most instances is intrusive and ungenial.



Lamp black must be mixed with white to produce lightness without losing its tone. Indigo the same, and any colour not compounded.

Cobalt, ultramarine, and verditer, work opaque.

Crome yellow, king's yellow, Naples yellow, Indian yellow, and Roman ochre, work opaque.

It requires some observation not to take opaque colour too dry, nor too wet, or it will drag and not lay even, or it will pull up the colour, or cause the white to rise on the surface. If too gummy, it will give great trouble, and if not sufficiently gummed, it will look dry, which, if repeated on with gummy colour, will peel off.

It would be advisable for persons unacquainted with colour, to try every colour with different strengths on a good-sized ivory pallet, then go through all the tints, and lastly the body-colours. By this means they would become practically acquainted with the compound parts of each tint, and save the trouble of frequent reference. It may be taken as a general rule, that the transparent colours require little or no gum; the semi-transparent more; the demi-opaque still more; and the opaque

colours most. Some few artists use no gum except in body-colour; but the different quality of the colours, in my opinion, renders a due proportion necessary, which is to be acquired by practice, and not by rule.

## CAMEL HAIR PENCILS

FOR

PAINTING ON IVORY.

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COLOURING on ivory has greatly improved of late years. The eminent masters having adopted a more solid manner, instead of the watery colouring and scratchy finish of many former miniature-painters. Water-colour is capable of much body and combination with great brilliancy. The improved quality and manufacture of water-colours has, in some measure, tended to improve the art.

Miniatures may truly be said to be painted which formerly were only coloured; their durability is therefore materially increased, and I have no doubt if solidity and richness of colouring were generally studied, the art would be in the highest admiration; their smallness and keeping, protecting them from the injuries of damp, &c., which oil productions are

less injured by. To apply the necessary fulness of colour to the ivory, a proper pencil must be used. Inferior artists and amateurs have long laboured under a mistake with respect to the proper brushes, they generally purchasing small fine-pointed brushes, supposing a fine pencil must produce fine work, which is the reverse of the fact. If the works of eminent painters are examined, nothing like the touch of a fine-pointed small pencil can be seen, the colour is solid, and the texture produced by finishing, is round, broad, and firm.

Few amateurs, or students, get sufficient colour down, by washing, to work upon. The deeper parts of the unequal colour contrasting with the lighter, they conceive it to be sufficiently dark, and do not consider levelling the colour does away with the contrast; the illusion as to its strength is removed, and it assumes a much lighter tone than they calculated on. The amateur generally commences this levelling with the fine-pointed brush, with the twofold purpose, of adding colour, and finishing—hoping to obtain some effect, but always under the mortification of finding the scratchy touches multiply, without producing any thing like

colour or harmony. The amateur and inexperienced person work colour on the picture from the point of his brush; the artist never attempts to finish till he has got the necessary body of colour to finish on. The tone of colour on a slight washed-in picture, worked upon with a fine pointed brush, can never be relied on, as the multifarious small touches must give the tone, instead of the body of colour, which is only regulated in finishing. Every one must make a distinction between colouring and finishing a picture. A full-sized pencil should be used with a good, but not one hair, point. The larger brush the artist can command the better. If a small brush is necessary to be used in outline, or minute parts of the portrait, the point should be round or square. I generally apply a sharp penknife to the hair of the smaller pencil next the quill, turning the pencil round till I cut through one-third. I then carefully square the point, which, after a few days' work, becomes in good order for use. This sort of pencil enables me to make a firm outline, the breadth of which converts to many good purposes, as the picture proceeds, and can be strengthened, altered, and

improved at will. The fine-pointed pencil makes a scratchy line; any alteration would require it to be washed out, and if correct as to form, every repetition would render it the more glaring. After the outline, the washing-in colour on the picture, with the full-pointed pencil, the painter is enabled to get clean breadths of colour, and to repeat upon his first tints without drawing up the colour, which cannot be done with the fine point. Numbers who have attempted miniature-painting, complain of their fruitless endeavours to prevent their disturbing the colour, notwithstanding they have avoided taking too much water—this difficulty, then, is mainly to be attributed to using a fine pointed brush. The full-sized pencil passing over a given space on its breadth, leaves the colour with an equal pressure. The fine point stabs at one part, and requires a lateral action to cover the part assigned, which lateral action disturbs the equality of the colour; imperfect colour is the natural consequence, and any attempt to take out or ease these imperfections, leads the parties into difficulties which their experience cannot extricate them from.

The full-sized brush deposits the colour at once,

leaves it brilliant, may be repeated upon with facility, the picture assumes a solid appearance, tint meets tint harmoniously, the work proceeds with proper rapidity, and the finished picture may be fairly anticipated at every stage. If a picture be well and sufficiently washed in, the use of a small fine-pointed brush cannot effect the finish. To finish a miniature it is necessary to go over the whole surface. The proper breadth of pencil readily accomplishes it, but the fine point makes it an endless operation, besides producing a laboured surface, without texture. It is impossible to discover the tone of a hair stroke; every finishing touch should be of sufficient breadth to exhibit its colour and tone, or we cannot calculate to any certainty what our picture may be. Sufficient, I trust, has been said, to induce amateurs and students to use large and full-pointed pencils. The usual sable pencils are too hard and stubborn; I always introduce a fine manufactured hair pencil, of great elasticity but soft.

## IVORIES.

The best ivories are those which have least grain, or condensed ridges, on the outer layers of the tooth. Those which are very transparent, or pearly, with a number of small condensed particles, are not good, nor those which are streaky and coarse. The colour always looks ridgy over those parts, the solidest painting not being able perfectly to efface them, especially if the picture be inspected, with the light striking on it in an opposite direction to that in which it was painted. Small ivories, being cut from the thinner end of the tooth, will run clear and good throughout, but those which are cut from the thicker part, have more grain as they increase in size; those with a clear centre, and as little grain as possible on the sides, are to be preferred.

To prepare them for painting, it is necessary to scrape out all the marks of the saw used in cutting them; they should then be rubbed down, with pulverised pumice-stone and water, with a muller, by a circular action, taking care there are no glassy or woody particles in the pumice, which cause



scratches. The pumice should not be too finely pulverised, or it will cause the surface to be slightly polished—the colour will not float freely, nor fix to the ivory. The surface should be finely granulated, with not the least shine, but having a dead level face. Just before finishing the wet pumicing, if the muller be passed a few times from top to bottom, and *vice versâ*, the colour will then float on freely, and dry even. After the saw-cuts are removed, I consider it best to pumice the ivory wet, as the dampness raises the more condensed parts, and they get fairly rubbed down. When the leaf gets perfectly dry, those parts offer an imperceptible hollowness, the colour which is washed on, is retained in them, and the colour dries level, which, if the leaf is prepared dry, those portions swell on the application of fluid, which running off, overcharges the lesser condensed parts, and on turning the picture, those condensed ribs are visible, by light streaks passing through the work, which is light on the elevations; they are not visible as the work proceeds, being generally performed under a left-hand light, but when viewed with a right-hand light, the rays strike on the re-

versed side of these slight elevations, which, while painting, were in shadow, when the elevated side next to the light, were lowered to the strength of the shadow on the reverse, and the whole looked perfectly level. I beg to remark to my inexperienced readers, that the brilliancy of a miniature depends on the colour being laid on so uniformly, that the surface may receive the rays of light without any impediment. The early part of a miniature painting cannot look brilliant, because the portions of colour do not present a surface sufficiently equalised to return or reflect the rays of light unshadowed or neutralised. Finishing a picture is nothing more or less than giving this superficial equality—it is not to get on colour, but to regulate it.

After the ivory has been levelled with wet pumice, it should be washed through clean soft water, and all the fluidity sopped up, by placing the leaf between clean blotting paper; while still damp, finish it with dry pulverised pumice, rubbing it in a circular direction with the finger: after dusting off the loose particles with a soft brush, it will be fit to commence painting on.

Some persons use ox-gall and other preparations, to counteract any effects from the animal oil, contained in the tooth, but all those processes are useless, and may be attended with some secret injury to the colour. It used to be a practice formerly, to place the prepared leaf between a sheet of paper and pass a hot iron over it, to draw out the animal oil and whiten it, but it destroys the fleshy appearance, and converts the ivory into a dry opaque bone. Another way was, to place the leaf between two pieces of glass, and expose each side, alternately, to the sun, till it had effected gradually what the hot iron did more speedily.

The natural fair leaf requires only a simple preparation, and all endeavours to convert bad coloured or faulty pieces are fruitless.

The leaf should not be touched on the prepared side, as the most delicate hand would prevent the colour adhering or laying level. It is necessary to attach the ivory to a piece of white card, for the convenience of painting on: it should be touched at the four corners, and intermediately with gum-water, put on a card, and placed under a weight till fixed; by no means to pass any pre-

paration over the whole of the back of the ivory, to attach it, as it destroys the useful transparency : being attached by the edges only, the picture is more brilliant, and there is no risk from the decomposition of the gum, or other glutinous substances, reflecting through, to the injury of the painting. Fixing the ivory all over has often perplexed amateurs and others, by the ivory warping the paper; the ivory expands while damp, which, when dry, contracts, and offers an inverted curve. If the paper be damped it contracts on drying more than the ivory, and an obverted surface is presented, unless, by chance, an appportionate dampness be hit upon.

These trifling circumstances are mentioned, that the inexperienced may avoid them, which otherwise would only be gained by perplexing experiments. Some continental artists cover the back of the ivory with corresponding tints to those on the obverse ; some silver or gild the reverse of the ivory under the face, to add lustre to the colours, but it is a poor substitute for the want of work. The artist who cannot depend on the solid principles of painting, will never effect his purpose by trickery. The

effect of light upon the picture is what we want, and not a reflected light below the colours, which comes off the silver or gold. I have cleared off those various practices, and if the subjects have been respectable, they have looked as well again. On whatever we paint, we should bear in mind, that it is the colour we have to trust to, and not to the substance on which it is laid ; the colour remains on the surface of ivory, as oil colour on canvass. On paper, a great proportion is imbibed, and when the work is finished, still the surface is paper although coloured.

The ivory is a medium between paper and canvas, the transparency of the ivory always having an influence on the colour, however solidly painted, unless it be in opaque colour. If an ivory is of a bad colour, and the parties have not an opportunity of obtaining a good one, a little whitening may be used wet on both sides, which will draw out or reduce the stains with less injury than an iron or the heat of the sun, but it is apt to polish, which must be got rid of entirely before it is painted on, by pummicing it again. If the ivory should work greasy, or have been prepared

with gall, the prepared ox-gall must, when once introduced, be continued throughout the painting, or the colour, not having gall in it, on meeting with it on the ivory, or first colour, will spread and settle beyond control. Prepared ox-gall is used by some few on miniatures, but it is not absolutely necessary.

NECESSARY CONSIDERATIONS  
FOR THE STUDY AND PRACTICE  
OF  
MINIATURE PAINTING.

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HAVING laid down some precise rules respecting the materials—which may be deemed the mechanical part—the art next claims our attention.

The term art, alone implies that it cannot be subject to absolute rule. Although the practice of artists may be recounted, every fresh disciple can only adopt them on principle, still following his own genius.

The mental talent, both as respects its power and activity, entirely depends on the individual—from its independent nature arises the numerous shades of proficiency in the art. The contemplating and reflecting artist may lay down modes for guiding



other minds to the same end, but unless the same cheerfulness, activity, and perseverance are resorted to, the same progress cannot be made. Genius is only an active imagination.

Genius, it may be seen, without any master, or led by the experience of others, will, although wading through many difficulties and much time, attain the higher eminences. This, I would awaken my readers to consider only as the consequences of a perpetual exertion of the mind. When voluntarily adopted, this exertion is not attended with labour, every stride is promoted and rewarded by pleasure. There are numbers who desire to gain improvement in art, yet live a whole life without it; others who set out, and after years of drudgery make but little progress, fancying that they want genius, the difficulties insurmountable, or that they cannot get on without every thing being shown them. They should study their own powers, and bring them into action. The genius, like the traveller in unknown regions, trusts to his own resources and perseverance.

Those who have a *desire* to succeed in the arts, and fail, can only attribute it to themselves. There



must be a radical defect in the activity of the imagination, or their perseverance. The imagination, being exerted and directed to an examination of the form, nature, or construction of every visible object that comes under notice, or is requisite to bring to immediate study, gives the general theory of mechanical and physiological knowledge. An artist must go further than mere examination, and by *imitation* exhibit a stricter inquiry.

To give a true idea of the necessary research, attempt the representation of a wheel, which is an article familiar to the sight from our birth. Unless we know the form of the nave, the shape and fixing of the spokes, the construction and application of the felloes, and the appropriate tire, the production would be puerile. Every other visible object demands a similar inquiry and theoretical knowledge, or, as we deviate from nature, or are deficient on mechanical construction, we retrograde from the true merits of an artist. This example may serve to give a true notion of the necessary and elaborate course to be pursued.

Those who start, alarmed at the profundity of

the art, will never rank as eminent artists. Genius will brighten at the prospect, and delight (not labour) to run the rewarding and boundless maze.

It is a mistaken idea, that we can be too strict to nature, and that we can, without following every particular, improve upon her—it is only an evasion, or an endeavour to lighten the operations of an active imagination.

It is certainly a *coup d'esprit* in the art, to deviate from nature without offending, but it is only a pleasing delusion, liable to call forth a variety of conflicting and capricious opinions. Deviations can only be defended by Taste, which should be founded in Nature. A splendid imagination may choose the phenomenæ, with which general capacities, or unexerted imaginations are unacquainted, but still they must be the phenomenæ of nature, for that is the true and legitimate source of all rational ideas. I am favourable to the strictest attention to nature, and whether we paint it or not, that it is well to know the minutiae. Suppose a picture painted in the best manner, and that it contain a vase, or some other accessory, and that it were possible, by optical illusion, to give a perfect

reflection of it, on the part assigned, without painting it, every spectator, I have no doubt, would instantly notice that object, in disparity to the other parts of the picture.

Persons who only know general forms, would look at it as they would at the real object; the connoisseur and artist would dwell on every particular.

Although the miniature painter's primary object is portraiture, accessories must be thoroughly understood, for things apparently foreign to the art turn unexpectedly to advantage.

It must not be expected, that heedlessly hurrying through a number of performances, skill and genius will crown us. Begin with caution, draw with reason, and proceed with judgment.

There is a species of inactive imagination, which is a bar to improvement—the delusion as to the precise ratio of attainment. If self-satisfaction gives them too high an opinion of their works, they are blind to the superiority of others, and seldom improve. This misconception every one must guard against without fear, should compare their

works, and by every exertion of the mind find out wherein consists the superiority, and by what means it is effected; there being the attendant satisfaction and encouragement to proceed, that they have accomplished all that is reasonable for their experience and practice. Proceeding by knowledge and a free mind, we are guarded against the inexperienced applause and flattery of friends, which is then taken purely as a compliment, and not allowed to flatter our vanity, at the expense of our judgment.

A young artist must be accustomed to see some one object in every angle of a circumference, around which the vision can receive it, or the object itself be turned to accommodate the vision. The manifold changes must be seen and thoroughly understood as to form, and combined with it, the multifarious shades of light and direction of rays. Every thing in nature should thus pass our vision, or the vision of the imagination. It is the knowledge and pride of artists thus to see nature—it is this that enables them to imitate, and distinguishes them from the general crowd, and it is for want of this activity

of the imagination, that people generally cannot judge, and commonly give such contrary opinions on the same subject.

To familiarize this idea, place a square box, equal in length, breadth, and depth, on a table which turns on a pivot; describe a circle on the floor, and place the table in the centre, traverse the circle, or have the table, with the cube on it, turned slowly round, having the eye on a level with the plane of the table. When the vision is opposite to the middle of a side, only that side can be seen; as it turns (or we traverse), we gradually see the second side increase upon us; at 45 deg. from whence we set out, we see equally the two sides in perspective, the side we first stood opposite to, on traversing 45 deg. more, recedes from our vision, as the second we are now before gains upon us, and so of the other sides.

Standing up and traversing this circumference, we then see the top and side; at 45 deg. the top and two sides, and so of the rest.

The point of vision, on standing up, should be called to mind, is only one out of three hundred and sixty times ninety, or thirty-two thousand

four hundred points of view, from which this cube may be inspected, that is, from each degree of the circumference, and from each degree of the counter semi-circles, projected from each degree of the circumference. Strictly speaking, from thirty-two thousand four hundred points of view, should be deducted three hundred and fifty-nine, for the repeated or duplicate views at 90 deg., or each radius or centre of the counter semi-circles, which leave thirty-two thousand and forty-one distinct points of view, from which the cube may be inspected.

Every person and object in nature are subject to the like changes from position, saying nothing of the influences of light, &c., which, if not fairly understood, leave the artist, and inspector of his work, equally unfit to pronounce an opinion, as far as position is concerned. These remarks are intended to lead to the comprehension of vision, or the cause why the same object differs on delineation, by being inspected under varying influences and stations.

Few persons give it a thought, and if brought under their inspection, can comprehend the cause of the deviation unless explained. Taking the multi-



tude, few persons understand plans or buildings in perspective. Although the vision sees every thing daily in perspective, and as the person moves, the eye unconsciously goes through all the definitions of perspective, which is often erroneously supposed to be an art palmed upon nature ; it is taken from nature, and is only understanding that according as the eye is placed to view its object or objects, it receives the forms accordingly.

The knowledge how to examine the objects we wish to depict, clears the way to the most important endeavours ; truly to understand our own eye-sight, is at once the key to the art, the basis of perspective, and the only standard for criticism or delineation.

Looking up to an object, on a level, or down upon it, are deviations of position readily understood, because the changes are violent ; the gradual alterations are little considered, and often lead to false impressions, and consequent erroneous charge of errors in the artist. The front face, the profile, or the back of a head, are readily acknowledged, but every deviation from the full face to the profile can only be comprehended by frequently draw-

ing from the person, or causing them gradually to turn, while we examine the changes, and study the cause of deviations from ordinary impressions. To do any good we must acquire this knowledge from practice, but it would save much labour to consider these points *well* to assist our endeavours. Pointing out the strictness of research necessary for an artist, and consequently showing the difficulty of attainment, should stimulate, not deter.

I expect to raise the art in estimation, giving those who wish to attain it emulation to delight in its infinite intricacies—to those who only inspect works of art the key to pleasure, or means of following the painter through all the operations of the imagination, instead of only liking or disliking without knowing why.

It is too generally considered that the exertion of the imagination is sedentary and laborious, but it is as little considered how perseveringly the pleaders of this excuse will apply to games or favourite hobbies. There is a greater pleasure to be derived from the imagination, than from what indolent minds term pleasure.

The amateur who has succeeded in any branch



of the art, holds a higher place in the circle of admiring friends, than the leader of fashion and folly.

The student in miniature painting must look attentively at every countenance, observe the various structures, the peculiarities, length, breadth, &c. The *tout ensemble* should be impressed on the mind, and the particulars noticed; observe the various ways the eye-lids collapse, while the features are in a state of rest, or moved by the passions; continue the same observations on the mouth and nostrils, and other parts of the face. It is necessary to form a good idea of the bony structure generally—to gain, by every means, acquaintance with the manner it is covered with muscles, flesh, and skin. We must court, by the most active intercourse, a general knowledge of disposition, character and talent—to arrive at the true and various ways they have an influence on the expressions. In drawing the features, the first efforts of most persons are marked by distortion. As a guide to correctness, I shall endeavour to describe the facial line, and give a method to understand it. The Facial line is that which, in a full face, passes

perpendicularly through the centre and base of the chin, lips, nose, and forehead; but as the head is turned, degree by degree, till the hit is in profile, the facial line assumes an increasing curve at each movement. Those that have not acquired an adequate knowledge of curves, I would recommend to take an egg (Plate 7, fig. 9), draw a line from the centre of the larger end to the centre of the smaller, and transversely at a right angle, or half the egg, down both sides; the centre line (holding the egg, the larger side upwards) to be considered the facial line.

The head being of an egg-like form, pass a line half-way round the centre of the egg, crossing the middle line, and again divide the top and bottom halves by two parallel lines, which will leave it divided into four equal horizontal parts; divide the lower quarter into three equal horizontal parts, by two circular lines, parallel with the three lines of the larger divisions, draw the eyes on the egg, placing the upper eye-lids on the centre line, the length of the eye to be one-fifth of the diameter or width of the egg, with the length of the eye between them. The bottom of the nose should

touch the next curve, or facial curved line. The division of the lips is described by the upper line of the two, which divide the lowest quarter of the face. The upper lip being above and the lower one below, the width being generally one-third wider than the nostrils, this drawing and lines on the egg describe the general proportion of faces, *viz.*, from the top of the head to the forehead one-fourth, from the hair to the eyes one-fourth, the nose one-fourth, and from the nose to the chin one-fourth; from the hair to the chin is termed the face, embracing the hair, or fourth quarter—the head. The upper lip one-third, and the lower lip and chin the remaining two-thirds, from the nose. The ear is the length of the nose, but as its position approaches the eye on some, or is placed more backward in others, the placing must be the result of observation. The iris of the eye is one-third the length of the eye, and the pupil one-third the diameter of the iris. By holding the egg thus drawn, and looking full upon the features, the facial line appears a straight one, turning it slowly round it becomes a curve, the lessening of the off side of the face will be perceived, and the dipping

of the extreme ends of the curved cross lines will explain the position of the features, or perspective of them, if viewed in three quarters, &c. This experiment will give the idea of the facial line.

The projection of the forehead and brows, the elevation of the nose, form of the lips, &c., must be allowed for, as though the parties trying this experiment were to add on the egg, thus lined, clay or other substance, to form the exact structure of the face. We imagine on the real head, these lines to pass through the base of the features, or egg-like form.

As a general rule, to keep the extremities proportioned to the face—the hand from the wrist, or root of the palm, to the point of the middle finger, is the length of the face, the thumb the length of the nose, the middle finger one-third longer than the thumb, &c.

It will be necessary to caution students, in drawing the human figure, not to make the fullest part of curves opposite to the fullest part of the transverse curves. The eye, for instance, if so drawn, assumes the shape of a sole. The fullest part of the curve in the upper eye-lid is near the nose,

that extending towards the ear being less curved ; the under eye-lid is fullest opposite the lesser curved part of the upper lid, that is, the fullest part of curves are diagonal, the one to the other ; which rule also applies to the limbs. *Vide* Plate 7.

To give an idea of the nature and operation of the muscles of the face, which should be known thoroughly to depict expression, I give a compressed extract from the works of an eminent surgeon and artist on the muscles of the Face, Eye, and Ear.

“ OF THE MUSCLES OF THE FACE, EYE, AND EAR.

“ The Occipito Frontalis is a broad and thin muscular expansion which covers all the upper part of the cranium. It consists of two bellies, with an intermediate sheet of flat tendon. One belly covers the occiput, the other the forehead, and the tendinous expansion covers all the upper part of the head. It lies upon the true pericranium, and slides upon it. The muscle is therefore named, with strict propriety, Occipito Frontalis ; sometimes Epicranius, sometimes Biventer, or Digastricus Capitis.

“ *Origin.*—The occipital portion is the fixed

point of this muscle, arising from the upper ridge of the occipital bone, and covering the back part of the head from the mastoid process of one side, round to the opposite side of the head.

“ *Insertion.*—The fore-belly of this muscle, which covers the forehead, is fixed more into the skin and eye-brows than into the bone; it is slightly attached to the bone, near the inner end of the orbitary ridge, and especially about the inner corner of the eye, and root of the nose, by a smaller and acute pointed process, but still its chief attachment is to the eye-lids and skin.

“ *Tendon.*—Which joins the two bellies, is exceedingly thin. The occipital belly has a firm hold of the ridge of the bone, its frontal belly has the loose end attached, not to the os-frontis, but to the brow and skin; and it is to raise the eye-brows, wrinkle the forehead, and corrugate the whole hairy scalp. It is a muscle chiefly employed in expressing passions, &c. There is a small pointed slip of the occipito frontalis which goes down with a peak towards the nose, and is inserted in the small nasal bone. This process being much below the eye-brow, must pull it downwards, and as an opponent



to the great occipital and frontal bellies, and might be described almost as a distinct muscle.

“The *Corrugator Supercilii*, the lower end of the nasal slip of the *occipito frontalis*, is fixed in the nasal bone. The lower end of this little slip is fixed into the internal angular process, and from the inner corner of the eye, the fibres sweep round the edge of the orbit, and going obliquely upwards and outwards, are so mixed with the fibres of the frontal muscle, and of the *orbicularis oculi*, where these two touch each other, that it is doubtful to which of them this little muscle belongs. So this slip of oblique fibres, rising from the inner angle of the eye, and being fixed into the eye-brow, also antagonizes the *occipito frontalis*, drawing the eye-brows together, and wrinkling the space between them, is very rightly named *Corrugator Supercilii*.

“*Orbicularis Oculi*, or *Palpebrarum*, is a neat and regular muscle, surrounding the eyes and covering the eye-lids in a circular form. It is exceedingly flat and thin, is about an inch in breadth, lies under the skin of the eye-lids, and is immediately attached to them, and but little connected with the bone. It has one small tendon in the inner corner of the eye,

which is both its origin and insertion. It is easily felt in the corner of the eye. They pass over the eye-lid to the inner corner of the eye, where they cross a little, and having just covered the edge of the temple, with their thin expanded fibres they return in a circular form, round by the lower eye-lid, to the point from whence they set out. It serves as a sphincter for closing the eye. It squeezes with spasmodic violence when the eye is injured, as by dust, and by drawing down the eye-lids so firmly it presses up the ball of the eye hard into the socket, and forces the lachrymal gland that is within the socket, so as to produce a flow of tears.

“*Levator Palpebræ Superioris*.—This small muscle arises deep within the socket, from the margin of that hole which gives passage to the optic nerve. It begins with a small flat tendon in the bottom of the optic cavity, becomes gradually broader, as it goes over the eye-ball; it ends in the eye-lid by a broad expansion of muscular fibres which terminate in a short flat tendon. It lies under the *orbicularis palpebræ*, is inserted into the whole length of the cartilage of the tarsus, and raises and opens the upper eye-lid.



“The Occipito Frontalis, but especially its occipital belly, raises the eye-brows, the pointed slip of the same muscle pulls them downward, the corrugator pulls them directly inwards, and knits the brows, the Levator Palpebræ opens the eye-lid, and the orbicularis oculi closes the eye. Whether certain fibres from the platisma myoides (a thin flat muscle which mounts from the neck over the cheek) may not pull down the lower eye-lid, or whether some straggling fibres, arising from the zygomaticus, may not have the appearance of a depressor of the lower eye-lid, it is not necessary to determine, since there is no regularly appointed muscle, and the lower eye-lid is almost immoveable.

“MUSCLES OF THE NOSE AND MOUTH.

“Levator Labii Superioris et Alæ Nasi.—It is a neat and delicate muscle (the Levator Labii Superioris) which arises by a small double tendon from the nasal process of the upper jaw-bone, close by the tendon of the orbicularis oculi. It is one little fasciculus of muscular fibres above, but as it approaches the nose it spreads out broader, di-

viding into two small fasciculi, one of which enters the cartilage of the nose, and the other passing the angle of the nose goes to the upper lip, thus it is pyramidal, with its base downwards, and named *Pyramidalis* by Casserius; it is called by Cowper *Dilator Alæ Nasi*; it raises the upper lip and spreads the nostrils wide, as is observed in a paroxysm of rage, and in asthmatics.

“The *Levator Labii Superioris Proprius* is distinguished by the name of *Levator Proprius*, because there are two others, one belonging to the angle of the mouth, and consequently to both lips, and one common to the lip and nostrils.

“The *Levator Proprius* is often named *Musculus incivus*, because it arises from the upper jaw, just above the incisores, or cutting teeth, and consequently just under the edge of the orbit; it is broad at its origin; it lies flat, and runs downwards, and obliquely inwards, to the corner of the lip, till it meets its fellow just in the *filtrum*. (The *filtrum* is the superficial gutter along the upper lip from the partition of the nose to the tip of the lip.) It pulls the upper lip and the septum of the nose directly upwards.

“The Levator Anguli Oris is also called Levator Communis Labiorum, because it operates equally on both lips ; it is named Caninus, for as the last-named muscle rises from the upper jaw-bone above the incisores, this rises above the canini, or dog-teeth, or the first grinder, by a very short double tendon. The exact place of its origin is half-way betwixt the first grinder and the infra orbitary hole ; it is mixed with the orbicularis oris at the corner of the mouth, so that it raises the angle of the mouth upwards.

“The Zygomaticus Major has nearly the same use and direction with this one, for it arises from the cheek-bone near the zygomatic suture, runs downwards, and inwards to the corner of the mouth ; is a long and slender muscle which ends by mixing its fibres with the orbicularis oris, and the depressor of the lip.

“The Zygomaticus Minor arises a little higher upon the cheek-bone, but nearer the nose ; it is much slenderer than the last, and is often wanting. It is the Zygomaticus Muscle that marks the face with that line which extends from the cheek-bone

to the corner of the mouth, and is so strong in many.

“The Zygomaticus Muscles pull the angles of the mouth upwards, as in laughter ; or one of them distorts the mouth, whence the Zygomaticus Muscle has gotten the name of Distortor Oris ; the strong action of the muscle is particularly seen in laughter, rage, and grinning.

“Buccinator.—This was long thought to be a muscle of the lower jaw, arising from the upper alveoli, and inserted into the alveoli, to pull the jaw upwards ; but its origin and insertion, and the direction of its fibres, are quite the reverse of this. For this large flat muscle, which forms, in a manner, the walls of the cheek, arises chiefly from the coronoid process of the lower jaw-bone, and partly also from the end of the alveoli or socket process of the upper jaw, close by the pteregoid process of the sphenoid-bone ; it arises also from the upper jaw ; it goes forwards with direct fibres to be implanted into the corner of the mouth ; it is thin and flat, and forms the walls of the cheek ; it is perforated in the middle of the cheek by the duct of the parotid

gland. Its principal uses are flattening the cheek, to assist in swallowing; in blowing wind instruments, it receives and expels the wind, and from blowing the trumpet is named the buccinator.

“Depressor Anguli Oris is a neat small triangular muscle, and is very commonly named *Musculus Triangularis Labiorum* from its shape. The base of the triangle is at the line of the lower jaw, where the muscles rise with a flat fleshy head, about an inch in breadth. It grows smaller, gradually, as it rises to the corner of the mouth, where it is implanted small, almost to a point, and directly opposite to the zygomatic and levator muscles, and as the zygomatic muscles make a line in the cheek to the angle of the mouth, this makes a line from the chin to the corner of the mouth. It is chiefly active in expressing the passions, and gives form to the chin and mouth. In cheerful motions, as laughter, &c., the zygomatic and levator muscles pull the angles of the mouth upwards. In fear, hatred, revenge, contempt, and the angry passions, the *Triangularis* pull the corners of the mouth downwards, and at the place where these meet, there is formed a sort of rising at the angle of the mouth, for a great many tendons are

crowded into this point ; the zygomaticus, levator, depressor, and orbicularis oris muscles, meeting and crossing each other at this place.

“ The Depressor Labii Inferioris is a small muscle on each side of the chin, which, with its fellow, resembles very much the levators of the upper lip. It arises on each side of the chin from the lower jaw-bone, under the line of the triangular muscle. It goes obliquely upwards and inwards, till it meets its fellow in the middle of the lip ; and where the opposite muscles meet, there is a little filtrum, or furrow, on the lower lip, as on the upper one. It mixes its fibres with the orbicularis, and its use is to pull the lip downwards ; each muscle is of a square form, and thence have been named *Quadratus Genæ*, the square muscles of the chin.

“ The Orbicularis Oris, or muscle round the mouth, is often named Constrictor Oris, Sphincter, or Osculator. It is very regular ; it is an inch in breadth, and constitutes the thickness of the lips ; it lies in the red part of the lips, and is of a circular form, surrounding the mouth the same as the orbicularis oculi encircles the eye. Its fixed points are the two angles of the mouth at that swelling, which is

formed by the union of the zygomaticus, triangular, and other muscles ; part of it takes origin from the alveolar process of the canine teeth. Often a small slip runs up from the middle of the upper lip to the tip of the nose ; it is the *Nasalis Labii Superioris* of *Albinus*, it lies exactly in the furrow of the *filtrum*, and is occasionally a levator of the upper lip, and a depressor of the tip of the nose.

“ These muscles of the nose and lips are not useful merely in expressing the passions ; that is but a secondary and accidental use, while their great office is to act in breathing, speaking, chewing, swallowing, &c. There are muscles for opening the mouth in various directions, which are all antagonized by this one.

“ The levator labii superioris and the depressor labii inferioris separate the lips and open the mouth. The levator anguli oris, with the zygomaticus muscle, raises the cheek and dilates the corners of the mouth directly backwards, opening the mouth. The angularis oris dilates the mouth downwards, pulls the angles of the mouth downwards and backwards, and forms it into a circle, if others act at the same time ; but the orbicularis oris is the largest and



strongest (and formed as it were by the fibres of these taking a new direction, and turning round the lips), shuts the mouth, and antagonizes them all.

“ There are some smaller muscles which, lying under these, could not be described without danger of confusion, as

“ The Depressor Labii Superioris and alæ nasi, which is very small and lies under the other muscles. It rises from the gum, or socket, of the fore-teeth, and thence is named, by Winslow, Incisivus Medius. It goes into the root of the nostril, and pulls it up and, of course, the upper lip down, and is named by Albinus and Cowper, Constrictor Vel Compressor Alæ Nasi.

“ The Constrictor Nasi, or compressor of the nose, is a small scattered bundle of muscular fibres, which crosses the wings, and goes to the very point of the nose, and meets its fellow in the middle ridge, where both are fixed to the middle cartilage, or into the lower point of the nasal bones, meeting with the peak of the frontal muscle, or its scattered fibres

“ The Levator Menti, which arises from the lower jaw, at the root of the cutting-tooth, has been named



*Incisivus Inferior.* It is inserted into the skin on the very centre of the chin, which by its contraction forms a dimple, and from its moving the under lip at the same time, it is named *Levator Labii Inferioris*.

#### “ MUSCLES OF THE EAR.

“ *Superior Auris* is named *Attolens*, because it lifts the ear upwards; it is a very thin flat expansion which can hardly be distinguished from the fascia of the temporal muscle upon which it lies, and arises broad and circular from the expanded tendon of the *occipito frontalis*, and is inserted narrow into the root of the cartilaginous tube of the ear.

“ *Anterior Auris* is a very delicate, thin, and narrow expansion arising about the zygoma, or rather from the fascia with which the *zygomaticus* is covered, it is implanted round the cartilaginous tube of its root.

“ The *Posterior Auris* is also a small muscle, very delicate and thin, but the anterior rises in one small and narrow slip only, while this rises commonly in three narrow and distinct slips from about the place of the mastoid process, whence it is often

named *Triceps Auris*. It goes directly forwards, to be implanted into the concha. It is named *Retrahens Auris* from its office.

“The ring and other bendings of the outward ear are called *Helix* and *Antihelix*, *Tragus* and *Antitragus*, and this determines the names of those ambiguous fibres, which are sometimes found lying upon these circles of the outward cartilage just under the skin.

“The *Muscular Helicis Major* lies upon the upper or sharp point of the helix or outer ring.

“The *Helicis Minor* rises lower than the former upon the fore-part of the helix.

“The *Trajicus* lies upon the concha, and stretches to the tragus.

“The *Antitrajicus* lies on the antitragus; and, lastly, there is the *Transversus Auris* of *Albinus*.

#### “MUSCLES OF THE EYE-BALL.

“The eye-ball is entirely surrounded by muscles, which turn it in all directions. There is one muscle, one either side, one above, and one below, called *Recti*. The truest description of the *Recti*

is as of one muscle, since but from position they are expressed by the same name. They all agree in their chief circumstances—that they rise by flat but small tendons round the margin of the optic hole from the Periosteum there, and there being one above, one below, and one on each side, they completely surround the optic nerve, and adhere to it. They are delicate muscles, which gradually expand each into a fleshy belly, which covers the middle ball of the eye. They still go on expanding, till they at last terminate each in a broad, flat, and very white tendon, which covers all the fore-part of the eye up to the circle of the Lucid Cornea, or Window; and their white and shining tendons form that enamelled-like part which lies without the coloured circle, and which is named the white of the eye, or the *Tunica Albuginea*, as if it were absolutely a distinct coat.

“ The only difference in these straight muscles is their length, for the optic nerve enters the eye, not regularly in the centre, but a little towards the inner side, so that the *Rectus Internus*, or muscle nearest the nose, is a little shorter.

“ The *Rectus Externus*, or nearest the temple, is

a little longer, but the Rectus Superior and the Inferior are of equal length.

“ The Rectus Superior, lifting the eye directly upwards, is named the Musculus Attolens, the Levator Oculi, or Superbus, as expressive of haughtiness and pride.

“ The Rectus Inferior, which is directly opposite to it, is named Deprimens Oculi, or Humilis, as expressing modesty and submission.

“ The Rectus Internus is called Adducens, as carrying the eye towards the nose, or Bibitorius, because it directs the eye to the cup.

“ The Rectus Externus, the outer straight muscle; it turns the eye away, is named Abductor Oculi, or Indignabundus, expressing anger or scorn ; when all these muscles balance, the eye is immoveably fixed, &c.

“ The Obliquus Superior arises along with the recti in the bottom of the eye, above and towards the inner side, and there it passes its tendon through the pully, whose hollow is marked on the os frontis, under the superciliary ridge, and near to the inner corner of the eye, often named Longissimus Oculi, the longest muscle of the eye.

“The Obliquus Inferior is with equal propriety named *Musculus Brevissimus Oculi*. It is directly opposite the *Obliquus Superioris*, in form, place, office, &c.; it arises from the nasal process of the jaw-bone in the lower edge of the orbit at the inner corner of the eye; it is short, flat, and broad, with a strong fleshy belly; it goes obliquely backwards, laying under the ball of the eye.

“These two muscles roll the eye, whence they are named *Musculi Circumagentes*, or *Amatorii*. But they have still another important office, *viz.*, supporting the eye-ball for the operation of its straight muscles—for when the oblique act, they pull the eye forwards, the straight muscles resist, and the insertion of the oblique muscles at the middle of the eye-ball becomes, as it were, a fixed point, a centre, or axis, round which the eye-ball turns under the operation of the *recti* muscles.

“The conjoined effect of the oblique muscles is to bring the eye-ball firm and from the socket, as in straining the eye to see at some distant point. The particular effect of the upper oblique muscle is not to bring the eye forwards, but to roll the eye so as to turn the pupil downwards, and towards the

nose. And the particular effect of the lower oblique muscle is to reserve this action, to turn the eye again upon its axis, and to direct the pupil upwards and downwards ; but the successive actions of all these muscles move the eye in circles, with gradations so exquisitely small, and with such curious combinations, as cannot be explained by words.

“ MUSCLES OF THE LOWER JAW, THROAT, AND  
TONGUE.

“ The muscles of the lower jaw require great power to grind the food, and, accordingly, it is pulled upwards by the strong temporal Masseter and Pteregoid muscles.

“ The Temporal Muscle is the great muscle of the jaw. It arises from all the flat side of the parietal bone, and from the sphenoid, temporal, and frontal bones, in that hollow behind the eye, when they meet to form the squamous suture. It arises also from the inner surface of that strong tendinous membrane, which is extended from the jugum to the semicircular ridge of the parietal bone. Its

insertion is in the horn of the lower jaw, not merely into the top of the horn, but embracing it all round, and down the whole length of the process, so as to take the firmest hold.

“The Masseter is a short, thick, and fleshy muscle, which gives the rounding of the cheek at its back part. It arises from the upper jaw-bone at the back of the Antrum, and under the cheek-bone, and from the lower edge of the zygomaticus. It lies upon the outside of the coronoid process, having the branch of the lower jaw quite down to its angle. The parietal gland lies on its upper part, and the duct of the gland (as it crosses the cheek) lies over this muscle. The jaw is firmly pulled up by these two, which are its most powerful muscles, and when we bite we feel the temporal muscles swelling on the flat part of the temple, and this upon the back part of the cheek.

“The two Pteregoid Muscles (four—two on each side) are named for their origin on the Pteregoid processes of the sphenoid bone. The Pteregoid Internus is that one which rises from the internal and flatter Pteregoid process, and which goes downwards and outwards to the angle of the jaw on its



inside. The Pteregoid Externus arises from the exterior pteregoid process, and goes not downwards, but almost directly outwards, and is implanted high on the jaw-bone, just under its neck, and connected with the capsular ligament. The Internus is named Pteregoideus Major; the Externus, Pteregoideus Minor."

This clear description of the muscles of the face, eye, and ear, must be serviceable to those who have not already given the subject attention. When we have before us a peculiar expression, the muscles will be peculiarly actuated, and the artist will best describe them, who has the fullest knowledge of the situation, immediate action of the governing muscle, and the auxiliary action of the surrounding ones.

Studies of the passions are usually placed before the student for his imitation, he can readily trace the extremes, but when he has occasion to define them under any modulation, his copy no longer serves him, and he finds himself as much at a loss as though he had not gone through them, and he soon discovers he requires some key to assist him in his endeavours—this can only be done by the



knowledge of anatomy. Assisted by this knowledge, he is prepared for every change of the features in the living subject, and must more perfectly understand the skilful archetype. Descriptions of the various passions may therefore not be of much use. The causes may be more essential, as the display of the faculties must be the self-acting operation of the artist, looking only on the studies he has passed, as a principle, to guide the multifarious evolutions he will be called on to define.

Anatomical works in abundance are readily obtained by those who wish to dip deep in the science, and those do well who arm themselves at all points to meet whatever may present itself, whereby they are ever prepared, by science and nature, to dispel mere opinion—not fallaciously trusting to natural genius.

Perhaps the principle of the passions may be gained better from the words of the late Mr. John Bell, than by a series of delineations and descriptions :—

“We see, in the dead body, those muscles which give form and character to the human countenance lying all dead and flaccid. The mouth open, the

lips loose and shrivelled, the angles of the mouth drooping down, the cheek sunk, and the eye closed and sunk down within its orbit. All the countenance is deformed, and the traits of individual character or beauty quite gone; but still enough remains to explain to us what those muscles are upon which chiefly the interesting variety of expression and forms depends.

“The Occipito Frontalis wrinkles the forehead, the Corrugator Supercilii knits the brows, the Levatores Labiorum lift up the lip, spread wide the nostrils, and open the mouth. The Depressores Labiorum depress the lip, the Triangular Muscles draw down the corners of the mouth, the Zygomatic Muscle distorts the cheek, and the Orbicularis Oris antagonizes all these, and closes the mouth. These muscles, while they are performing more important offices, also express the passions, and mark the countenance with traits never to be effaced—the true study of those who would be physiognomists, who talk but idly when they speak of expression in those immoveable features, which are formed by the contour of a bone. ‘The sagacious forehead, or ecomical nose,’ are the rhapso-

dies of an enthusiast, not the serious observations of a sedate man, studious of that subject which is interesting above all others.

“ The shape of the bones determine the general form of the face. One great muscle, the Masseter, gives the rounding of the cheek, the rest are all delicate and moveable muscles, and the great characters of the face centre round the mouth and nostrils where these muscles converge. The lean and delicate face gains in expression where the cheek is hollow, the angle of the mouth moveable, the lines strong; but those who are bloated, the cheek is fuller, the lines obliterated, the delicate turnings of thought and feeling are lost—all but the more violent strains of passion are buried in the mass. The great lines of character are the line of the Zygomatic Muscle coming from above, and of the Triangular Muscle coming from the chin, and the moving point towards which they attach is the corner of the mouth.

“ In cheerful emotions the features rise all towards the eye, which becomes full and turgid.

“ In the depressing passions the features sink,

the eye is languid, and the whole countenance gets a thoughtful, serious cast. But it is still the corner of the mouth that is the central point of all these changes.

“ The corners of the mouth are continually supported by the action of the Levator and the Zygomatic Muscles—they are raised high in smiling, so as to form a dimple there—they are raised higher in laughter so as to swell the cheek, wrinkle the eye-lids, and compress the eye, till tears begin to flow. And the corner of the mouth which is thus raised in laughter, is distorted in pride, malice, hatred; is dilated and drawn backward in rage; drops lower in grief, and in palsy falls quite down.

“ These movements round the angle of the mouth are the chief indications in the face itself, while all other indications of passion proceed rather from the general system.

“ A healthy body and cheerful mind have the face full, the eye humid, the limbs braced, the whole body free and light moving. In languid health, or under affliction and care, the face is pale,

the eye sunk, the whole body languid and relaxed; and so it is in passion, for the medical arrangement of the passions is nearly correct.

“ There are two great classes of passions, as joy or anger; the heart beats high, the face is turgid, the eye sparkling and prominent, the muscles are tense, the limbs braced, the whole body is in a moveable, active, and highly excited state. But when the heart beats languid in grief, or palpitates with fear, the face becomes pale, the features sink, the limbs tremble, the whole frame is unbraced, cold and unapt for motion; and from these general conditions of the system, result all those other marks of passion which accompany the changes of the face; for in grief, fear, despair; the blood ebbs, the face is pale, and the features sink; while in anger, the face is red, the eye-brows corrugated, and the eye turgid and strained; but in rage, the whole muscular frame is strained toward the most violent action; the breath is retained, while the pulse beats high, and so the face becomes turgid, the eye is fiery and red, there is a grinding of the teeth, the angles of the mouth are strained backwards, the nostrils are raised and dilated, the

Buccinator, Zygomatic, Masseter, and Temporal muscles are in violent action, which gives an angular and linear hardness to all the features, and saliva and foam proceed from the universal pressure of the glands."

THE  
SITTINGS FOR A MINIATURE.

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FIRST SITTING.

THE room, in which the sittings are taken, should have but one light, looking northward, because the light continues the same, and is not subject to the changes caused by the passage of the sun in rooms receiving the light from other quarters. An east light is nearly as good, if the room has a window ; but if a skylight, it is influenced by the oblique rays of the sun, till it has passed the meridian. The light should be so high as to fall upon the person sitting ; the distance they should be placed, and the consequent angle of light, must be determined by taste, and the length of the artist's sight, governed by the character of the party sitting. If a window, the light should be excluded from the lower part, near which the artist sits, to give

the fullest and most perfect form to the shadows of the face, which might otherwise be cut up by under-reflections. Fine developments of the forehead, should be placed, so that all the ocular forms can be distinctly delineated, in combination with the cast or deep shadows under the brows, which, though richly and strongly marked, must be transparent in painting, to produce an effect which the reflected light from the upper part of the cheek and surrounding bodies always introduces.

Studying a favourable position for the eyes, and producing a picturesque appearance in the brows, the shadows from the nose and under lip are almost sure to accord. Delicate features—women and children—require a treatment as delicate, and great attention should be paid to place them to preserve it; enough shadow must, however, be introduced to preserve the roundness, and render expressive every sweet and tender undulation. With good sight, the person should sit three yards off, nearer approach is generally discovered in the picture, by the off-shoulder appearing too high, the features drooping, &c. The artist, sitting higher than his



subject, introduces the same faults; unless he is prepared against it—sitting the person too high leads to the opposite errors. It is well to sit the person, so that the face is a little higher than the artist, and give as much distance as the eye can fairly reach, and without much motion take in the *tout ensemble*. In the eyes, great variety presents itself, and it is particularly desirable to observe the iris of the eye, the whole circle being seen in full eyes—in rage and fear. In eyes less full, the iris passes up under the upper eye-lids, &c. The person should never be set so much sideways as to bring the eyes strained into the corners.

The nose is a feature admitting little motion, the nostrils only moving by the action of the nasal muscles in strong excitement of the passions. Notwithstanding the stationary character of the nose, it demands great consideration in adjusting the sitter. From various causes, the cartilage of the nose is seldom uniform or perpendicular on the face. It must be inspected full-faced, right and left three quarter, and in profile, to gather from the variations the form which suits with the presiding expression in the combined features; an irregular

aqueline nose, inspected in a three-quarter view, will appear hooked with the one cheek towards you, and inverted on the other, arising from the insertion of the cartilage to the nasal bone, projecting unequally on one side, and proceeding in an angular direction towards the tip of the nose. An inequality of size or form in the nostrils, will also have an influence on the character. Hence it is expedient, for those who are unacquainted with these causes and effects, to examine extreme cases, which, being very apparent, will give a judgment where the case is only perceptible to the practitioner, from its slight deviation from regularity.

So great is the difference in many faces, when inspected in opposite directions, that one of the two views, however accurately drawn and painted, would not communicate the likeness, it not being the usually observed characteristic form.

The prints which are before the public of the late Duke of York, from paintings by various eminent men, will familiarly illustrate the foregoing observations. Those describing the face with the left cheek towards us, have the nose convex or

hooked (which was the character of the profile), on the reverse the nose appears nearly straight, *both* with the intermediate deviations being correct as to peculiar selection, but not as to familiar and generally recognised character, which makes a general impression.

The mouth is the most difficult feature to pourtray, and requires considerable taste to delineate, as it is seldom at rest. It is the most flexible muscle in the face, subject to an infinite variety of form, the slightest operation of the mind changing it, and alterations insensibly take place, as the mind guides it by transition of sentiment. The closed mouth, with the other features in a state of rest, is not more difficult than the delineation of the nose, but when put in motion, the selection of *one* expression requires great care, for the picture can pourtray but *one* of its many variations. Aged persons are easier to paint than young ones—the animation having ceased considerably—that is, the variety and velocity of motion has ceased, the muscles round the mouth have become inactive, the lines prominent, and the mouth tranquil.

All the features in a state of rest would imply,

in a painting, suspension of the mind. To give animation, the features must be put in motion, the quantum can only be determined by experience. From tranquillity to the smile, may be ranked as familiar expressions, unexceptionable for portraits, and not subject to capricious observation; excited and laughing expressions occur less frequent, the increased shadows are less comprehended, and the pictures are considered pedantic. In composition, where cause explains effect, every expression is admissible, and may be employed with the happiest result. It is better, in portraits, to give a generally recognised character, than those only seen on particular occasions, which are transitory to the common observer.

The bow-like line, caused by the union of the lips in a closed mouth, is perhaps the best to describe first, in an expression we wish to represent in the picture; the upper boundary of the upper lip is easily adjusted upon it, by causing the sitter to renew the smile, and if not readily given, change of conversation must be resorted to, till we again see the expression we set out with; the under lip must be gained the same way. While the absolute

form of the mouth is under our consideration, the shadows which surround it (caused by the action of the muscles) must be impressed on the mind, lest a change of light, health, or animation, at the next sitting, cause effects which do not accord with the outline previously obtained. The appearances we begin with and draw from, should be those we finish up to; the future sittings should serve rather to recall the first, than to alter the picture to what we see at each time, or we may ask, what is the use of accuracy of outline, on which every thing depends, and so many cannot be made to see the necessity of? On these observations depend the art of taking a good likeness, for no one must expect the person, light, animation, &c., to remain fixed even during one sitting, much less under the influence of future visits. Changing the picture to present appearances, is often the means of spoiling it, the first sketch being more striking, if the artist draws well, and attends to his outline.

The artist, being aware of these provisions, and anxiously studying them from nature, is often compelled to see his picture compared with his subject, under different light, dress, and expression, and

to hear disappointment expressed, that there is not a correspondence, although resemblance is admitted.

No picture ever classed with the original, under such circumstances, any more than the person appeared to the eyes of the artist at the various sittings. The resemblance of the character is what we want, and is all that can be represented. We cannot mix or pluralise character consistently.

Too strict attention to the outline cannot be paid, it being a difficult matter to be literally correct. Rigid practice renders accuracy habitual and a pleasure; slovenly drawing generates labour and difficulties. Many persons become slovenly by imperfectly aiming at the masterly stroke, without recollecting that it is necessary first to be accurate, then masterly. Accuracy does not require the drawing to be loaded with useless minutiae, all the features and contour should be spirited, which leaves room to enter breadths of light and shade, agreeably to the highest effect—the necessary minutiae being held in prospect.

A miniature meets with more general approba-

tion, with the features nearly in a state of rest, merely actuated by some pleasing influence of the mind, unless opening the mouth agrees with the peculiarities of the original, or gives a requisite animation.

In the combination of features, there is always a predominating character, which, whether laughing, crying, silent, &c., we perceive reigns over the whole. It is that *je ne sais quoi* we want, and must have, to give satisfaction. Every view of the head will not give it; the reason is, it is not so marked in some as in others, the nose, as before stated, being one leading cause. Many persons may recollect, at some period or other, having caught a glance of a friend, but from the view of the face giving a selected and not predominating character, have been doubtful if it were their friend or not. Thus, from an unfortunate choice of position, many a likeness is well drawn and skilfully treated, which is not considered good.

The person being seated to the best advantage, and the pallet set, proceed to drawing:—

It is customary to draw on a piece of Bristol paper, arranging the subject, then with some colour, agreeably to the style of the artist, to



strengthen the outline, and lay broad masses, without softening, over the place of the shadows—madder brown is a very good colour for the purpose. This sketch thus exhibits the masses of the hair, the marked shadow under the eyes, nose, mouth, side of face, if in shade, drapery, &c., over which the ivory is then placed (having been previously gummed at the four corners and intermediately), so that the head is brought to the proper space on the ivory, a weight is placed upon it, with a piece of clean paper between, and in five minutes it will be attached, and fit to proceed on. The coloured outline shows through the transparent ivory, and serves as a guide for tracing—correcting the drawing from the person, which may, with this assistance, be done at once. I have seen descriptions to outline on the ivory faintly, with a silver point, &c., but any thing besides colour is not good.

From long practice I have discontinued drawing on the card, and design at once with colour on the ivory, saving the time of making the first outline, to my own ease, and the accommodation of the sitter. It is desirable not to alter the outline, it may, therefore, be perceived, that it will require



much practice to do without the card-sketch. I cannot, from this reason, advise beginners, or those who draw imperfectly, to commence on the ivory; but I would recommend the strictest attention to form, first with the pencil, then make the attempt on the card with the brush, and, as soon as confidence will permit, to draw at once on the ivory; for the traced sketch seldom possesses the spirit of the first drawing.

*Set the Pallet as follows :—*

Vandyke Brown.

Indian Red.

Madder Brown.

Indigo.

Venetian Red.

Intense Brown.

Madder Lake.

Vermillion.

Seppia.

Indian Yellow.

The patches of colours set in this order, the tints described in this treatise are conveniently compounded. Additional colours may be introduced on the blank spaces, or on the other side. Take only as much water as will grind the colour in small patches—large patches waste colour, and do not leave sufficient blank spaces to form the compounds. An ivory pallet is best for miniature painting, the tints appearing the same as when worked on the miniature.

The eye nearest the artist, in a three-quarter face, is placed in the middle of the breadth of the ivory; the chin, in a person of middle stature, in the middle of the length, and higher according to the proportional height of the person. As the description of painting a face in a three-quarter view supplies the most observations, it is first necessary to consider the size of the ivory to be painted on, and to form an idea of the proportion the head should bear to it; the upper lid of the near eye should then be drawn, proportioned to the space assigned for the head, and for a guide to the relative proportion for the rest of the features. The mind must arrange these points before we

commence, or we shall find every thing too large or too small for the happy proportion of our picture, and the conveying a just notion of the stature. The work will have to be washed out, and time sacrificed, if this is not attended too.

The adjustment of the head to the size of the ivory, and its equally diminished features, is not to be taught; every one must bring themselves, by scrutinizing practice to mathematical accuracy, to adapt form to form, superior to mere rule, for something will be discovered in drawing every face, which can only be surmounted by experience, originating from the variety of nature never presenting a duplicate, and the influence of each mind, multiplying it by exhaustless diversity.

The length and form of the near eye being drawn, take the same breadth for the commencement of the nose, next the inner corner of the other eye, which being on the round or receding curve of the head, take a degree shorter breadth for the other eye-lid, the inner corner nearly meeting the line of the nose, eyes closer than usual, the distant eye will come nearly up to, and sometimes within the line of the nose, particularly in hollow

orbits, with a large and prominent nasal bone ; the under eye-lids may now be formed, or left till the general proportions of the rest of the face are satisfactory. Draw that part of the nose which comes down from the eyebrow (the nasal bone), with the off, or right eyebrow (supposing the subject to sit with the left cheek towards us), taking care that it be neither too high nor too near the eye-lid ; describe the left eye-brow with equal care. The attention must next be drawn to the line above the upper eye-lid, caused by the collapsing of the muscle on opening the eye ; it is very diversified, folds but little in many, in others to such a degree as to overhang, uniting in the middle with the line of the lid, opening only towards the nose and the outer corners. This line has as much influence on the resemblance of the eye as the form of the lid itself. In infants, these two lines unite at the white tendon, in the inner corner of the eye, and gradually break into two commencements as the orbicular muscle develops. By the quantity of development the age of children may be judged. Some eyes never distend, the collapsing line always drawing from the tendon. It is rare to see both

eyes formed alike, and we may often trace the cause to the unequal development of the orbicular muscles, or their action.

We may now proceed with the line of the nose—(the cartilaginous part) ; to the point, judging of the angle or prominence, by *imagining* a line raised perpendicularly from the point of the nose, observing where it would pass into the right eye, the width of which, when compared, will enable us to judge of the length of the nose. The outer corner of the right eye, the inner corner or rise of the nose, and the point of the nose, form a regular or irregular angle, by position or prominence. The septum, or form of the lower part of the nose—and nostrils, are peculiar to each individual, but being nearly stationary features, are readily imitated.

The width of the mouth, if compared with the width of the nostrils, is rendered correspondent—the width, in general, is one-third wider. The eyes, nose, and mouth, being fixed, the contour of the face may be accurately drawn, by observing the breadth from the outer corner of the eye, the top of the nose, and corner of the mouth. The

form of the head, from the different styles of dressing the hair, cannot be described, and must be obtained by comparing the forms, and proportioning it to the features.

As it will be apparent to every one, that accuracy is necessary, and that being so depends on a ready ideal measurement of infinitely various, combined, and intricate form ; it may communicate the principles for obtaining it, by stating, that an idea of the space, for each distinct part of the drawing, should impress the mind ; for instance—draw a miniature on a card, cut out the piece that contains the hair, the whole face, the cravat, the neck and chest (if a lady's picture), the coat or pieces of drapery, leaving the background entire, then lay them together as a whole, or as a puzzle is put together. This will give an idea of the masses, or totality of each section of the picture—the minutiae of each section, well appropriated, unite as consistently—the properties of each section, united with the sections, form a totality, or just idea of the plan of the picture. Describing the portions of a picture, make less impression than seeing them when separated.

Outline the eyes, with the broad-pointed small pencil, with Madder Brown, taking the colour with some strength, making the upper eye-lids with firmness. It may appear thick and strong to persons unaccustomed to it, but the breadth converts to use in the shadows of the lids, which project over the *Tunica Albuginea*, or white of the eye. The apparent strength vanishes on the introduction of surrounding colour. If made too faint at first, it has repeatedly to be strengthened, and often the spirit of the form is lost. It is better to appear too strong than too weak, if the drawing is accurate—taking off the white of the ivory on introducing the background will reconcile it. With Madder Brown form the nose—one broad mass should include the shade on the lower part of the nostrils, and the shadow cast from them on the upper lip; leaving the *Septum*, or cartilage between the nostrils, to be made out afterwards on this mass. Lay the upper lip with the same colour at once, and let it fall into place; define the under lip with Madder Lake and a little Indian Yellow if bright, and with a little Indigo and Madder Brown describe the



lower boundary of the upper lip, which will secure the expression of the mouth, and the finishing touches will not stand abruptly on the work.

The contour of the face and the ear may next be entered with Madder Brown. Change the pencil for a larger one, and imitate the darker masses of the hair as accurately as possible, firm in colour, leaving the ivory only for the high lights. If a gentleman's picture, draw the line of the collar with a little Indigo and Indian Red, or any other neutral colour, which may suit the complexion and surrounding colour. Form the cravat, and sketch the figure as true as possible. I would not advise any consideration, whether this orbless sketch bore any resemblance, only that the forms were accurate and proportioned in all particulars with the party, general contour, and easy position. Touch in the pupils of the eyes with Seppia, Intense Brown, or Lamp Black and a little Lake, so that both are directed towards you, or look equally away. Draw the outer circle of the iris, with the colour of the eye to be represented. When dry, add the colour



over the whole iris, leaving a small white spot for the visual ray. You may now judge if your likeness will be good. At this time, take a small looking glass, of excellent quality, and holding it vertically to the side of the picture, look at the reflection in it—if the drawing is incorrect, the eyes will not look at you, the mouth will appear distorted, the forehead project away, or the off-side of the face appear too large. Any error must be corrected before more is done. When the drawing bears examination you may proceed.

Some artists outline with Lamp Black and Carmine, mixed to a middle tint, and arrange all the gradations of shade with it, and by skilful treatment finish highly on it. There are many other processes agreeably to the variety of styles. I have always found Madder Brown an agreeable colour; it works clear and freely, lays a warm ground, supporting transparency in finishing the shadows; it converts to many agreeable tints by working other colours over it.

On the examined outline, lay evenly, with Madder Brown, the mass of shadow under the eyebrows, the deepest shades at the outer swell of each

under eye-lid ; mark the nostrils, and separate the lobes of the nose, by deepening the cast shadow, the peculiarities of the shade under the under lip, caused by the crossing of the *Depressor Labii Inferioris Proprius* muscle, the shade down the face, round the bottom of the chin, and the ear. This positive manner leaves every thing so decided, that we have only to refer to the original to fill up to them, the principal cause of likeness continually refreshing the memory.

Instead of just touching the point of the brush into the colour, rub up the colour till it can be taken equally fluid and clear. The maximum of fluidity practice only can regulate—always have enough, never work dry, it is as bad as having considerably too much, which will float and settle uneven and with edges.

A small portion of gum should be introduced in the first outline and shades, to prevent its stirring in the after-work, and it is necessary to remark, not to work on the point of the pencil, but on a moderate inclination, making the lines firm at once, without leaving off or patching.

The features being in one colour only, we

must next introduce pearly tones and grey tints. With Madder Brown and Indigo meet the shade under the brows, at the corners of the eyes, the swell of the under eye-lids, the temples, between the eyes, upper lip, and chin, leaving the broad lights clean and open, to receive the carnations, which should now be laid on the cheeks, chin, &c., with Madder Lake, spread with a breadth of pencil, without regard to patches, in the manner oil-colour is laid on. Without breadth the colour is too imperfect to form a basis or judgment of the intended effect. Touching in the colour by patches, leaves so many interstices to destroy its true effect, unless they are very broad, equally handled, and we are prepared by experience to anticipate it.

The tint of Madder Brown and Indigo, laid on as a receding or delicate shade, may be passed over the Madder Brown first laid down; having its own colour in the compound it will harmonise. It may be taken as a standing rule in miniature painting on ivory, that tints to be applied, having the same colour in the compound as the colour it is laid on, will always be to our satisfaction, if the compound is clean and good. It is well to com-

pound tints with this idea, to subdue or heighten the work.

If the picture in embryo reminds us of all the anatomical forms, the masses of light and shade, and the locality of colour, the first sitting may be given up.

Drawing freely, this process takes an hour or an hour and a half—a longer period for a lady's picture, on account of the curls, ornaments, drapery, &c. The time stated, is that of an artist who draws with colour on the ivory, those who require to draw on card, must allow at least half an hour more, or take an extra sitting.

It is more favourable to the picture to work rapidly, to spare the sitter fatigue, and to prevent the mind of both parties flagging.

It is the practice of many artists to draw the face on the first sitting, slightly indicating the hair and figure, in miniatures which embrace only the head and shoulders. I prefer fixing the hair and defining the drapery, if well dressed and picturesque, for reasons after assigned. If the head is badly dressed, and the party has not on the dress to be painted, I yield to necessity.

After painting a few miniatures, it will be apparent how different any person in the same dress, and the hair dressed, as nearly as possible, will appear to the critical eye of an artist, on taking the second sitting. An intruding curl and its shadow, on a lady's face, will give another cast to the countenance; the hair flatted by a hat, a different collar, a black or coloured cravat substituted for a white one, an officer in uniform, then in private dress, and the like transformations; for these reasons, I consider it best to commence with the sitter as they are to be painted, to form a true conception of the *tout ensemble*, positively to indicate the countenance, style of hair, and outline of the figure, letting the after-sittings and variations serve only to remind me of that first impression I had concluded on. We are liable, by following the changes, to mistake the character, and lose the strength of the likeness. Should, however, more graceful forms of hair, &c., present themselves, and they tend to improve the first drawing, it is desirable to make amendments.

Persons generally are particular in their appearance for the first sitting, have more animation than

when they repeat the visit, anticipating the confinement which no one considers agreeable ; if a graceful negligence favours the picture, do not lose the opportunity of displaying it.

Pictures of larger dimensions, embracing the hands, and more than a plain back-ground, require a different treatment ; the head must be drawn, the figure sketched, and the back-ground studied, they being too much under consideration for an artist to decide *à l'instant*. Pictures of this sort are the work of experience, I shall, therefore, confine myself to the usual small miniature in my description.

#### SECOND PART OF THE FIRST SITTING.

Between the first and second sitting, if the recollection is retentive, regulate all the tints in the face, leaving them as much as possible free from irregularities or blotches, which must be done with a moderate-sized hair pencil on the flatted side. Small touches from the point would only increase the number of irregularities of a smaller size, and defeat that breadth of wash which will best contri-

bute to a solid effect. According to the complexion, go over the whole face with what may be termed the flesh or local colour. If dark and healthy, with Madder Brown ; if fair, with Venetian Red, Vermillion, or Madder Lake and Indian Yellow, mixed to a Vermillion tint. The choice of a local flesh tint must be determined by the harmony it will form with the shades and shadows. The passage must be done with caution not to disturb the drawing of the features, passed equally, and not too red. It cannot be floated on, but must be applied with a broad flat brush, with as much gum as shall shew a trifling glaze when held in the direction of the light. The strength of colour must be determined by the complexion of the party and the state of the picture. It is better to have to repeat the passage, than to have it too strong. The face will now stand for another sitting ; with the broad pencil flat the hair, still leaving the ivory for the gloss or high lights. Do what can be done safely to the drapery, and determine on the colour and arrangement of the back-ground, which pass on by turning the ivory upside down, holding it on a slight inclination. Use a large pencil to float on the ground,



and lay it level till it is dry. If the colour cannot be determined, float on a tint of Indigo and Madder Brown, which will be no detriment to whatever colour may be superadded. The back-ground thrown on in this stage, serves to suppress the whole of the ivory round the head, lightens the apparent strength of the first painting, and enables us to treat the boundary of the head and face at the next sitting.

#### BACK-GROUND TINTS.

From Seppia, Indian Yellow, and Lake, may be formed many tints by altering the proportions, and which will make a diversified ground without the aid of any other colour.

Lamp Black, Gamboge, Lake, and Burnt Sienna, or leaving out the Sienna, make excellent tints, which work solid and free. A little Blue as a finish works to good effect.

Lamp Black and Burnt Sienna form a warm colour.

Lamp Black and Carmine floated, levelled with Vandyke Brown, and finished with Ultramarine, look well.



Lamp Black and Carmine is a good preparatory ground when red drapery is introduced.

For Blue, or Sky-grounds, there should always be a neutral tint passed over first, or the Blue will overpower the picture, and look poor.

Indigo and Burnt Sienna, or Indigo and Vandyke Brown, make fine green-tints; but if used too copiously in floating, parts settle and dry black.

Vandyke Brown, worked over a neutral ground, loosened with a little Lake, and finished with Ultramarine, or Indigo, has a fine effect.

Any floated ground that has Vandyke Brown, or Gamboge in it, must not be worked upon with Seppia without great care, or it will turn the more solid parts black.

Ultramarine, Verditer, Cobalt, require rather more gum than the other opaque colours, or the work will look dry on the surface, if placed on a transparent ground.

Nature interposes so much air between the vision and the back-ground, that no raw or monotonous colour should be used without neutralizing and

tempering, which give the appearance of atmosphere, and harmonizes it with the head.

Skies having a variety of colours—first pass over the neutral ground, then put all the colours in order, and a combining tone worked over the whole will blend and finish.

The arrangement of the picture, and practice, will suggest many other compounds. The colour of the back-ground should never violently contrast with the head or drapery, but should rather be managed to support both.

Many float on nearly the full strength of the back-ground at the first wash. This cannot be done till the head is very forward, without many hard edges settling round the head, and destroys the combination which should subsist. The tone is not easily altered, and variety seldom attained. It is best to neutralize the ground according to the proposed local colour; to patch on the tints to suit the figure. A picture finishes easier, and looks better, when brought forward in every part progressively.

If in floating the back-ground, parts settle in

streaks or dark masses, reduce the lighter parts to the same strength as the darker with broad patches. This gains solidity, looks more satisfactory as it proceeds, and the finish has an equal operation.

#### THE SECOND SITTING.

On taking the second sitting, dispose the person as nearly as possible as at the first. If the first sitting were taken on a bright sunny day, and the second should prove a gloomy day, be prepared to see every shadow less distinctly and spread; the high lights much lowered, and everything less spirited, which, if painted down to, the brilliancy might be difficult to recover at the next sitting. If time and circumstances admit, it is best to choose similar light, that the appearances may differ as little as possible. Get the person to sit similarly to the first sitting, without being fastidious, for if the attitude be well chosen, and the first drawing accurate, a little deviation will in no way impede our progress. The cast we have chosen will still be manifest, and from the contrast of this position, we may the more readily perceive the cause.

The hair, both of ladies and gentlemen, will be different in the masses, although the general arrangement will be the same; the first formation should still prevail, and the only addition should be such accidental forms as will add grace without altering.

As in most cases, the artist only sees the parties when sitting to him, he can only form a limited opinion of the complexion, which may be much higher, or lower, on those occasions than on the aggregate. The temperature of the atmosphere and constitution, from sitting to sitting, will exhibit changes, and taking a medium for the carnations, we are least likely to err, both as to the true colour of the subject, and what is necessary for the tone of the picture. Persons recently from the country often present colour too high, and unusual for their general complexion. The artist's perception must guide him where there is excited colour or paleness from indisposition.

If the form of the shadows in the first painting differ from those at the second sitting, do not alter them if they convey the true character, some muscular action—slight change of position—some un-

discovered cause, works the change, and would through a dozen sittings—which should ever determine the artist to adhere to the *one* impression (and, perhaps, the first is the best), on which he must be judged.

I am aware, that without due consideration, this direct copy of the character (basis of its form) and unalterable adherence to it, will appear to many injudicious and impossible to attain; and sitting down satisfied that they have not the ability to do it, would rather get what is termed a fair sketch, and be led to get a likeness together piece-meal. Till practice has matured the judgment, every one must be satisfied to do their best, but in that practice every endeavour should be their best, done with accuracy, not leaving forms to be got more correct, which in themselves will have altered, when the attempt is made to do so, which is the case with the form of shadows in portraits painted from life. It is only inanimate and stationary bodies that we can refer to with certainty as to figure. Hence it is better to leave trifling apparent inaccuracies in the first painting, and work up the picture, than to

be ever altering and producing more, by following fictitious and changing forms.

If friends are permitted to be present at the sittings, set them in such a direction that the subject need not turn to address them, which would perplex, by exciting so many expressions, or cause the person to turn just as the artist is making forms which require the greatest care.

If the party sitting is less or more animated than we require for our first painting, the expression must be lowered or heightened by the introduction of suited topics, which the general knowledge of the artist only can supply. Throughout the painting of the features, especially the eyes and mouth, some favourite subject of the sitter should be maintained.

Being prepared for every deviation of form, light, and colour, which may occur at a second sitting, give depth to the upper eye-lids, and the collapsing line above, with Madder Brown and a little Indigo, put in the stronger part of the eyebrows, as well as that part of them which is loosened by the light, with the colour of the hair

Improve the deep shade under the brows, and all the peculiar forms of shade caused by the Orbicularum Oculi muscle, commonly called the upper and under eye-lids. Make out the nostrils, and strengthen the cast shadow. Regulate the corners of the mouth, upper and under-lip, and its shade—the chin, and the ear. This practice of going through the features preserves our first drawing, and by the strength assumed by this improving repetition, working the rest of the face, can scarcely obliterate a portion of the likeness. The portions of the face, or breadths between the eyes, nose, and mouth, when brought as forward, will unite with them; reduce the hardness of their outline, and bring out the true likeness. The colour of each of the features should be the same as at the first sitting, unless we have worked too red, in which case we may take the colour more grey, and *vice versâ* if we have worked too grey. Having regulated the forms of the features, next take into consideration the colours in the face as locally affected by light and shade. With the pearly tint of Madder Brown and Indigo, or Madder Brown and Lamp Black, improve all the half shadows on the face, still leav-



ing the outline of the face open for the reflected light, which comes off, surrounding solids, and lightens the visual margin of all curved forms. With the colour for the eye strengthen the iris, leaving the lower part lighter, or the side, if a full eye, and lightened by reflection. With Madder Lake, and a little Indian Yellow, give the most brilliant carnations their proper place. Healthy persons have the lower part of the forehead warm, the cheeks rich, and the chin fresh; the inner corners of the eyes red, and the ear warm. Take Madder Lake, Venetian Red, and a little Blue for the side of the nose, leaving the ivory white, for the light which rests on the elevation of the cartilage, and on the tip. With the same colour unite the carnations with the shade down the sides of the face, round the mouth and chin. In dark complexions, the Madder Pink and Indian Yellow will be too bright and delicate, unless we have previously laid down a tint of Madder Brown; indeed we should be very cautious of colour working too bright, and as we proceed with the first sitting, we should not be alarmed at the want of brilliancy, but so unite the greys with the colour, that improving the local



colouring, at the second sitting, with some portion of the greys; the finishing with brilliant and transparent colour will unite the whole agreeably, and produce as much brilliancy as nature will warrant.

The highest light will be found on the forehead. The upper part of the cheeks, though apparently as light, are not so in reality; the angle of light being more acute, and the part being surrounded by strong shades about the eyes, nose, and side of the face, the lower part of the face gradually increases in shade down to the chin. The beard in men's faces deepens the strength of colour. Turning a well painted picture upside down will perfect the idea of this precept, by the insensible loss of light on the lower features.

The sides of the face should never be left with pure colour, but should be so united with greys, or neutral colour, as to represent the loss of the immediate rays of light, give rotundity to the head, value to the high lights and local flesh-tints, and to harmonize with drapery or back-ground.

The lips should now be treated. Full mouths require the upper lips to be painted darker than thin lips, particularly if the upper lip projects.

Madder Brown is a good colour for the upper lip where depth is required, finished with Lake. In other cases, Madder Lake. The under lip, Madder Lake; Vermillion, &c. as circumstances may demand.

Venetian Red and a *little* Indigo.

Venetian Red and a little Ultramarine.

Vandyke Brown.

Lamp Black and Madder Brown, &c. may be used to advantage in subduing the tones on the lower part of the face. Most complexions will take the first; very delicate ones, the second; dark, swarthy ones, the third; healthy, ruddy complexions, the last. It may be observed in some complexions the reds predominate, in others blue, in others yellow; in either case the picture must be commenced with such colours as will enable us to finish to character; and it is well to lower all the shades, and the base of the local flesh-tints as much as possible in the early part of the painting, to avoid working heavy, and opaque colour over the transparent to produce the shades which never has the appearance of shade, but stand on the painting like dirty etchings.

The whole of the face should present at this sitting every variety of anatomical form, all the peculiarities of the complexion, all the influence of light and shade ; but, of course, the colour partially irregular, which we must be satisfied with, till we proceed to the finishing.

Pass colour over the high lights of the hair, covering the ivory, but not destroying the lights.

Head-dresses in ladies' pictures—cravats, &c., in gentlemen's, should be forwarded to the state of the face.

The foreheads of men are more muscular and strongly marked than women; the eye-brows are generally heavier, the nose more irregular, or muscular, and require more drawing. Men's faces should be painted boldly and fearlessly, representing every muscular strength. Women's faces require more delicate treatment; and from the absence of muscular forms, have less drawing, but more delicacy in the round, or subtilely-pleasing union of light and shade, and consequently are more difficult to paint than men.

Rather take an extra sitting, than go on when a lady shows symptoms of fatigue.

Before giving up the second sitting, every colour in the face should be tinted on the picture, and so united, that decided blue, red, or yellow, cannot be detected; the shadows not opposed to, but supporting the lights:

The early practitioner must not be deterred at the want of brilliancy in this stage of the picture, nor attempt to finish till the shadows are amply coloured, the local tints harmonized by the happy interposing colour between them and the stronger shades, and the high lights covered with a light tint. The picture had better appear too dark than too light throughout the two first sittings, for proper finishing levels the unequal colour which now appears darker than it really is, through the contrast of the darker with the lighter parts of the colour; which lights, being brought up to the strength of the darker touches, clears, levels, lightens, and the true and desired brilliancy appears. A well washed-in picture takes less labour to finish, and the texture is always better.

The colour being applied at this sitting with a full-sized pencil, on the flatted side, the delicacy and frequency of the passages leave the face re-

gularly hatched, or etched, from the lapping of one touch partially on the adjoining one. If those passages are laid the course of the muscles, and turns of the face, they will leave without study a fine uniform hatching, which readily converts to a pleasing stipple or texture.

Many miniatures, in the old style, have the floated ground finished by a regular course of diagonal hatches or lines, slanting from right to left, without stippling.

Hatching and stippling are more pleasing to the eye, and more consistent with good painting; not that a texture is formed for texture sake, but because the nature of ivory prevents us laying colour over colour perfectly even, without regulating, to which it is well to give the most pleasing appearance. When experience enables the artist to pass on the colour boldly, guided by a judicious observance of quality and quantity finished with taste, the picture will have an appearance as flat and solid as oil-colour. Subjects which admit of great depth, and copies from the old masters, may be treated with a solidity and finish equal to oil.

## SECOND PART OF THE SECOND SITTING.

Between the second and third sitting, proceed on the back-ground. Increase the depth as the subject requires, in the same way the colour was got on the face, but with larger masses. Lessen them as it gets level, and touch out the lighter parts of the ground in the direction they may occur. Proceed again, and again, equally over the whole, regulating the strength of the colour to the various depths that may be determined on for the back-ground. There is a necessity nearly to finish the back-ground, to be enabled the better to judge of the face, which, if finished first, may not be to our wishes when the ground shall be finished. As the face is the first consideration, it is better to have to harmonize the ground to the face, than the face to the ground. When the back-ground assumes a level, solid appearance, produced by the repetition of hatches or masses of colour, it should be stippled, each touch being a semi-curve laid in every direction, the light interstices between the hatches

clearly pointing out where the stippling is required. The equal texture will shew when it is finished.

Stippling should not be done on the point of the brush, but with a firm touch drawn across the light, which fills it up without destroying the hatches. Where these touches cross, the colour doubles, which, in a *finished* miniature, leads the inexperienced to suppose it is dotted.

A beautiful texture is produced both on the face and back-ground, by first floating the colour, then with broad hatches (instead of continuing the smaller masses or patches), till the whole requires stippling. Each hatch should be so broad that three would cover the tenth of an inch, with their two interstices. For the face these hatches, both as to colour and direction, must suit their locality. For the back-ground (having the arrangement in irregular colour), commence at the left hand lower corner, making five or six hatches on an angle of 45 deg., little more than the eighth of an inch long, set the same number beside them on an opposite angle, and again diversify and continue them some distance up the picture. Return to the bottom,



repeat the hatches at slight angles to each set of first hatches, till by repetition, the colour has assumed a level intersected lattice-work, the equally handled and diversified direction of the hatches forming at each insection a mellow spot. Then stippling the lights in the intersections brings the surface level, prepares it for an equal reception of the rays of light which is the cause of true brilliancy in a good miniature. Continue this process, space by space, over the whole ground, apportioning the strength of the hatches and stippling to the state of each part.

A beautifully executed stipple engraving will give an idea of its finished appearance.

I should advise the former method for beginners, till they have ascertained how level and brilliant, faulty or uneven colour will become by patching with care all the lighter parts, and only repeating on the darker parts when a level colour is produced. It is only continuing the same process till it requires a final regulation or stippling. Having become masterly in regulating colour, they may speculate or compare with the other method; adopt which they please, or adapt them to various sub-



jects, it being always better to have more than one process to avoid mannerism.

Having nearly finished the back-ground, give further finish to the hair or head-dress, which will discover to you precisely what the face will want. Repeat the local and flesh-tints, as far as colour is concerned, leaving any thing doubtful till we see the party again.

Get the coat of a gentleman's, or the dress of a lady's, picture sufficiently forward to prevent the unfinished appearance leading the ideas astray as to the true force of the head. Woollen drapery being best represented by body or opaque colour, the back-ground should be finished near the figure before it is applied, or the coat will cut upon it, and have a disagreeable appearance. The space the coat will cover may be coloured, with any colour, to suppress the white of the ivory, previous to passing on the body-colour.

Ladies' dress requires great care, and unless assisted by a lay-figure, to work the dress from, a sitting on the dress alone will be requisite.

## THIRD SITTING.

We must now look for those particular points which shall stamp the resemblance with truth. The previous general colouring must now be reduced to confirmed form. The picture at the first sitting should resemble the party as seen at some distance; at the second sitting, as on nearer approach—and at this, as when near; and we can critically detect the nicest peculiarity.

It is highly necessary the party should be familiar and cheerful. Enliven the eyes by giving full strength to the pupils and iris. Full eyes have more reflection on the iris than sunk or small eyes. The eye-brows should be defined. If brilliant lights fall on the projecting lids of eyes, prominence of forehead, tip of the nose, grey hairs, &c. with a wet brush take out the colour cleanly, and then touch them over with gum. Lights thus effected are better than introducing white, which is liable to change, and does not harmonize with the transparency of the face.

Give force to all the carnations, work Vandyke

Brown over parts too blue. Venetian Red and a little Blue will finish, and lower Reds, which are too glaring, or Madder Brown and a little Blue in dark complexions.

All the breadths of shade should be increased or decreased—the light colour of each compound, to lighten—and the darker, to lower. Give a degree of finish to the margin of these forcible shadows which mark the peculiar form of the features; that under the brows, describes the brow itself, the Orbicularum and the nasal structure; that under the nose, the lower form of the nose and the upper lip; that under the mouth, the lower lip—which shadows (cast shadows) should partake of the form which casts them agreeably to the angle of light, and the form that receives such shadow. The greater or lesser strength, by consequence, is according to the greater or lesser prominence.

Be careful not to have the high lights in a face too bright, or on working up the picture, its brilliancy and, perhaps warmth, will out-stare the local tints and shadows, and cut the whole into pieces of light and dark, instead of that gradual harmony of shade with diversified colour in the

countenance, which nature so pleasingly invites us to imitate.

Mark the eye-lids, nostrils, and their shade, corners of the mouth, the under lip, chin, &c. Lines, strongly marked from the collapsing of parts, should have a tint of Indigo and Madder Brown, or tints corresponding with the colouring, to meet such line, to represent the rotundity which causes them, and to reconcile them with the nearest light.

Every part of the face, hair, or head-dress, drapery near the face, &c., should, at this sitting, be in such a state of resemblance, that finishing the surface of the colour will conclude the work.

#### FINISH.

Having taken the sittings, and so arranged the picture that the resemblance, colour, light, and shade, together with the back-ground and drapery, have their full depth and keeping, we may proceed to finish. A picture that is well washed-in, when held at a short distance, will have a finished appearance, the distance reconciling the unequal particles of colour—finish admits the nearer inspection. The

picture now displaying every variety of form, colour, &c., it will be manifest that the colour only requires regulating; take, therefore, a colour, or tint, consistent with the complexion of the party, and stipple out the interstices. In most cases, Venetian Red and a little Indigo will answer our purpose. The little portion of Blue prevents the Red from operating too powerfully on the high lights, it is friendly to the local hues, and illuminates the shadows. Venetian Red is partially yellow, which, with the Blue, forms a tint, that associates with the Blues, Reds, or Yellows, of the features.

If we, in finishing, work Red over Red, Blue over Blue, &c., it is evident there can be no combination, but each will be distinguishable, and often the one or the other will intrude more powerfully than is consistent with nature or agreeable to the vision. As I said before, the finishing is to regulate, not to add colour.

In dark healthy complexions, more Blue may be added, or Madder Brown used alone, or with a trifling portion of Blue.

In swarthy complexions, the Vandyke Brown tells beautifully on the shadows, especially if we

have demi-opaque colour to finish on. If not already blue enough, a delicate complexion, finished with Ultramarine, has a fine effect.

The Intense Brown works beautifully over the Blues, about the chin, &c. in dark countenances.

The secret of finishing depends on taking a tint that shall meet the state of the picture, with only partial introduction of other finishing colours.

The back-ground should receive its final finishing, making it to support the colouring in the face, working Greys, if too warm, and Reds, if too cold.

Lastly, finish the drapery with strength and spirit equal to the rest of the picture.

#### REMARKS.

Suppose the process of a picture to go on fairly, the amateur, or the student, gains his object from description; but if, as is most likely to occur, his work perplexes him, and difficulties, too powerful to surmount, stare him in the face, it is then the usual conclusion, that the genius is defective, or the description faulty. The appearance of a picture in process is so different to what it bears in a

finished state, that few on commencement are satisfied, that proceeding and finishing will effect their purpose—they desert their work, and begin again and again. Not going on, they at last despair of success. I should say, from description, go on, and in the end (if not the whole) some part will answer the expectation. On other attempts, progressive confidence will be gained, and where the conception was imperfect, perfect ideas will take its place.

For the more rapid accomplishment of this desirable end, I shall suggest a servile observance of the rules laid down; and, regardless of all appearances, to proceed (of course using the best endeavours), then, on conclusion, to criticise the work. Without a finished attempt, the amateur has no standard for comparison. It is more than likely that the subject will be too red or too blue, some parts much too light, or too dark—or lines and edges destroying the harmony, &c. Begin the same subject again; if the reds have predominated in the first attempt, introduce more greys in this—even overdo it intentionally, for contrast sake,



for we learn the intermediate effects by violent contrasts.

Lay down some colour, then work over it, with associating but contrasting colour to change its hue, to gain the method of converting it to the will. In this experiment it is necessary to bear in mind, that the passages, whether washed, hatched, or stippled on, unless worked long enough, perfectly to cover the part, do not discover the value of the operation; touching merely here and there will not elucidate the principle.

Lines which look abrupt, though well placed, require working above and below to take off the crudeness of them.

On parts too red or too blue, introduce their opposites with a little of each as a tint; hatch carefully and sufficiently, and we effect our purpose.

In process, level uneven colour, by patching or hatching, before you proceed, or the heavy parts will destroy the effect, by contrast, for it cannot be expected that the finishing colour will have equal operation on unequal powers of colour; likewise by levelling we ascertain the power in itself, which,

till levelled, is deceiving, the lighter parts giving the darker power by contrast.

It will be readily understood, that first putting down Venetian Red, passing Blue over it, and then Lake, is the same as mixing the three for application, as every one knows that passing Yellow over Blue turns it to Green. It will readily be seen how much better it is to pass colour over colour, to effect our purpose, than to compound and pass it on ; for if compounded, the portions of each, the one to the other, are unknown—are fluid on the pallet, which, on application, alter ; the change it undergoes on the pallet is also unknown, and not to be computed or reduced to rule.

Colour passed over colour, altered by other passages, are judged of, on the first application, by anticipation ; on the second and succeeding passages by knowledge of combination, contrast of surrounding colour and quantity.

Quantity has great influence over the quality, and as pictures gain quantity, the alteration of hues therefrom are better and more certainly regulated by passage over passage than by compounding. It

is more simple in the operation to add the component parts of a tint to our wishes than to compound, and again compound, incongruous and unknown quantities and mixtures, by compulsion of circumstances.

Quantity must be regulated by the quality; as we may take light transparent colour more copiously than dark or opaque, and of course it takes more to change a dark colour than a light one; that a transparent colour over an opaque has less influence than *vice versâ*. That opaque with opaque colour has less combination than opaque and transparent, or two transparent colours. Transparent colour with transparent colour of the same quality, forms a perfect combination. Transparent with semi-transparent, demi-opaque, or opaque, are less perfect, agreeably to their greater or lesser opacity. Some combinations are not perfect or equal, the active properties of the one being greater than the other, as Seppia and Gamboge, &c., the Gamboge being absorbed by the property of the Seppia.

Ultramarine does not mix well with other co-

lours, particularly transparent, for its chalky quality absorbs, and it is said, when mixed, to lose its brilliancy.

Quantity must also be studied to effect true *colour*, for unless we have sufficient, we are deceived as to true colour, for example:—Take a picture which is thinly but neatly coloured, and by patching, hatching, and stippling, finish any part, the remainder will no longer be agreeable to the eyes; the reason is apparent, it wanted quantity to produce its true quality or colour. It is of the first importance to an aspirant to miniature painting, to be convinced of the truth of this observation; without proving it by trial, they are always insensible to its real value, and their application of colour, and handling, must remain deficient—the perfection of an artist being always on a ratio with his knowledge.

In support of these precepts, I would refer the connoisseur or the student to the works of eminent miniature painters.

I shall conclude my description of the sittings, &c., by remarking—that miniature painting is an

*art*; consequently, definite rules cannot be laid down—the principles only can be explained—and that those principles must be in a great measure unintelligible, till nature has been studied as to *form*, *light*, *shade*, and *colour*, and familiarized by imitation.

## THE SCRAPER.

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DURING the process of painting a miniature, agreeably to the principles of this Treatise, a scraper is indispensable.

It should be formed like a phlegm, or the point of a lancet, of a triangular form, with two cutting edges, nearly straight—too much curve on the edge cutting in the centre while scraping, would destroy the even surface. From the middle, or thicker part of the edges, it should be ground hollow (like a razor), or it soon wears thick; the blunt instrument answers no purpose. It should have a short stem, or handle, about four inches long, like the common eraser.

After the first sitting, and the subsequent preparation for the second, use the scraper over the whole picture, particularly the face, holding it lightly between the thumb and two first fingers, with the edge slanting towards the surface, which

will remove unnecessary excrescences in the colour. This operation should be repeated after each sitting, and if much depth is required, intermediately. The instrument must be used with considerable address and caution, lest the heal scrape down to the ivory. The use of the lancet, or scraper, is generally for the removal of defects in the colour only; by applying it to the colour of the picture, considerable advantages are derived. The glossiness of gummy colour receives repetitions on it unfavourably. In a picture commenced boldly, the outline and first shades rise above the level of the ivory; the colour next applied hangs against them, or removes a portion on passing over them. When scraped, the gloss is removed, and its finely granulated surface absorbs the additional tints, and condenses the colour.

This process, repeated at convenient periods, brings the colour to such a texture and quality, that (unless through carelessness) the liability of disturbing the under colour is obviated, or forming blotches, which destroy harmony, and are laborious to rectify.

The removal of intruding particles, or errors, is



usually performed with a scraper; but to scrape a face, &c. repeatedly, is scarcely known; and as far as my information reaches, never has been adopted for the avowed purpose of leaving *the colour exposed to the view*, by the removal of the vehicle for applying the colour (gum)—thereby having the colour instead of the *vehicle* of application for a surface. This porous, or absorbing surface, forms a key to hold the next passage; the particles or true colour unite closely, and by pursuing this process, we are sure to have a solid and brilliant colour.

The circumstance which first induced me to adopt this process on principle will exhibit a sufficient reason. Looking over a large coach manufactory, in the painter's shop, I observed on the rough boards, beside the grinding-slab, a large portion of colour, which projected some inches; this I ascertained was produced by the men cleaning their brushes on that part, after having gathered the colour from the slab into pots. (It is here necessary to remark, that the brush being scraped over the pallet-knife, to leave as little in the brush

as possible (*i. e.* dry), but little oil works with the colour in cleansing the brush on the wall.)

Various colours, used for the coach bodies, were laid one over the other, till in time, the quantity increased and became very hard. A similar produce, my friend informed me, he had adzed off and had cut into various shapes, which stood a polish equal to marble, with the most united and beautiful interlineation of colours. This gave me an idea, if oil-colour, cut through, received such polish, that water-colour of sufficient substance, if cut through, would have a different surface to the ordinary one, which is gummy from the particles of colour precipitating, and the gum remaining above. This surface removed by scraping sufficiently, I considered we should present colour, gum which binds it remaining more between the particles than on the surface, and by repeating this process, we should give to water-colour on ivory, the beauty of this polished oil-colour.

The finishing, which is not scraped, effects what varnish does to an oil painting.

I have given it as my opinion, that something

like this was the process of the old masters, having observed more colour on their pictures than on the modern. The surfaces (not the finishing) being similar to scraped, or cut colour, as if the various lays had been reduced to a level surface, to receive the finishing painting.

The painting (except the finishing), in genuine old pictures, exhibits no marks of the brush (being rubbed down, cut through, or pounced), but is condensed and polished, which moderns affect to imitate by glazing. The surfaces of oil in the various lays of colour being removed before painted on, contraction and consequent cracking does not occur, but colour remains, and bids defiance to modern imitation. The compactness of the colour by incision, and the removal of the pernicious influence of the working medium, is a sufficient explanation of the fresh, uncracked, solid, and brilliant appearance of the works of the old masters. The less oil, the less sinking and lowering of colour, it being the oil which destroys the tone as it undergoes decomposition. On levelled colour, time forms that beautiful platina which, perhaps, paintings not so treated may never possess. The colour

on a miniature must always be dry when scraped, and the loosened particles swept off with a brush before painted on again. The greatest care and equality of action must be adopted, or it will do as much harm as good.

Where the Greys are firmly painted and cut through (using Ultramarine), the finished picture would lead to the idea that White had been introduced. The lowered and combined hues defy copy without scraping.

Copies from oil paintings are only apologies, unless depth, colour, and handling, remind us of the originals. Original miniatures should be painted with the same spirit.

Hitherto, it has been considered unsatisfactory to copy in water colour, but by the knowledge of the use of the scraper, we may make originals in miniature.

The general adoption of the scraper would rescue miniature painting from the obloquy of being an inferior branch of the art, as an equally solid appearance may be obtained by it.

The same skill is necessary to draw the one as the other ; indeed, the equal diminution of a mi-

niature requires greater. The same knowledge that makes a good portrait painter, is requisite for the miniature painter. The superiority of an oil production is only in its not being so liable to damage, which relates to the materials, and has nothing to do with the art of making a picture.

DRAPERIES, OR BACK GROUNDS, IN BODY  
COLOUR.

The use of body, or opaque colour, is essential to miniatures, woollen draperies, &c., being best represented by it. White must be used with Blue and Black, and to lighten other opaque colours; Yellow and Red require no White; Green, Brown, Olive, &c., may be compounded of opaque colours without White; opaque colour, without White, is more agreeable to use than those which require it.

Lamp Black and White, with a little Lake is used for the local tint of black drapery, introducing more White for the high lights, and pure Black, with an increase of gum, for the shadows.

Indigo, White, and a little Lake for Blue

drapery, with more White for the high lights, and Indigo and Lamp Black for the shadows. Prussian Blue, Indigo, Ultramarine, Verditer, &c., with White, make lighter Blues.

Green is composed of Indigo, with either Crome, Indian, or any opaque Yellow—by introducing Red, Olives, Browns, &c., are produced.

Lamp Black, and Indian Red, and White, or Lamp Black, Indian Red, Roman Ochre, and White, for Greys.

Crome, Indian Yellow, or King's Yellow, used for yellow drapery, are shaded with a mixture of Lake.

Vermillion, used as a local tint, is shaded with Lake, or Madder Brown, and the deeper shades with Seppia, or Lamp Black and Lake.

Body colour should be well mixed on the pallet, or the compound will show on application.

The colour must not be worked too stiff, nor too washy ; in the first case it drags, and destroys the level surface ; in the latter it washes up the colour from the ivory, or causes the White to rise with the strokes of the brush.

The colour may be floated or worked on ; if

floated on, the picture must be laid horizontal, and, with a full pencil, lay the local colour all over the part assigned, which should be covered till dry, when the high lights and shades may be added; if worked on, a broad flat-pointed brush must be used, laying the patches side by side, till the ivory is covered, and when dry, repeated, till an even local tint enables us to proceed; working on the colour is less liable to peel off, and we can work to a proposed hue more certainly than floating, which may dry lighter or darker than we wish, in which case we must patch. Floating warps ivory very much, and as the colour dries faster than the ivory, when it comes back to a level the colour is loosened and peels.

The portion of gum, used with body colour, requires practice to discriminate; it is better rather to decrease than increase the quantity, if the colour is worked on. It is well to let a piece dry on the pallet, from which we can ascertain if it has sufficient glaze.

Where body colour is proposed to be introduced, in proceeding on the other parts of the picture, we shall find it necessary to cover the ivory with colour



(without White), and we must finish the transparent part of the painting within those margins, to place the body colour on.

The White used cannot be too finely ground.

#### DRAPERIES IN TRANSPARENT COLOUR.

Drapery should be outlined with accuracy from the dress itself, the deeper shade of the folds indicated, the intermediate shade produced, and the high lights left. The local tint should be added, without loosing the spirit of the forms of folds, &c. It will be unnecessary to describe the treatment of colour, which is governed by the knowledge of light, shade, and reflection. White drapery, being the most difficult for beginners to represent, I shall shortly treat on that head. Muslin should be painted transparent, which must be fully considered on washing in the picture, by slightly indicating the flesh, or faintly tinting the drapery over which it will pass, leaving the ivory for the high lights where the muslin folds; it does not require the use of White if the ivory is of good colour, provided the shades and surrounding drapery are painted to

nature. Figured muslin, and the pattern or gimp of lace require White; the texture of the plain part of lace should not be attempted; without deviating from my general desire to please the ladies, on this point, although I have known painting the sexagon form of the plain lace give great satisfaction, I should not feel disposed to court applause by attempting it. On so small a representation, the diminished sexagons, and diminution of the thickness of the thread, would be a month's operation for a Chinese or Persian copyist. It is sufficient to paint the dress, over which it passes, less distinctly, and imitate the pattern with White.

The White, in this case, should be free from dust or colour, and laid with a body, and, when dry, gone over with the scraper, lightly handled, to leave the surface pure White, and not too prominent. The White must be lowered according to the gradual decrease of light on the various parts.

White cravats and collars are best represented by the ivory, if the shadows are painted as low as nature gives them to the eye—the chance of White changing is obviated.

Satin requires White, the lights being very sudden. Silk requires little or none.

The best way to acquire skill in painting drapery, is to practice from silk, satin, stuffs, &c., using the tints laid down for regulating the colour.

Ornaments, jewellery, &c., must be studied the same way, referring to the opaque tints for the necessary compounds.

THE END

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*Plate 2*





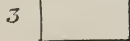


# Plate 3

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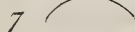
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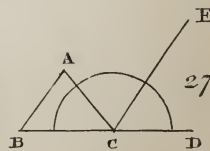
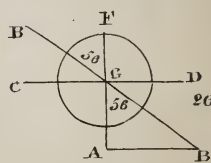
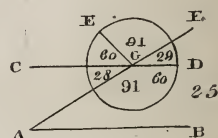
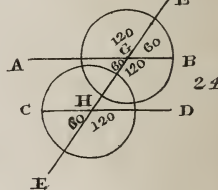
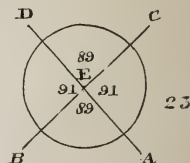
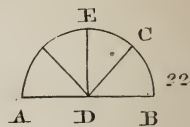
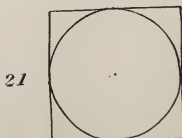
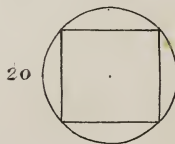
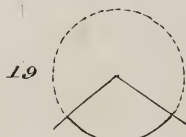
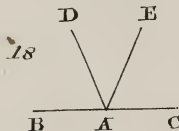
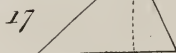
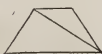
12



13



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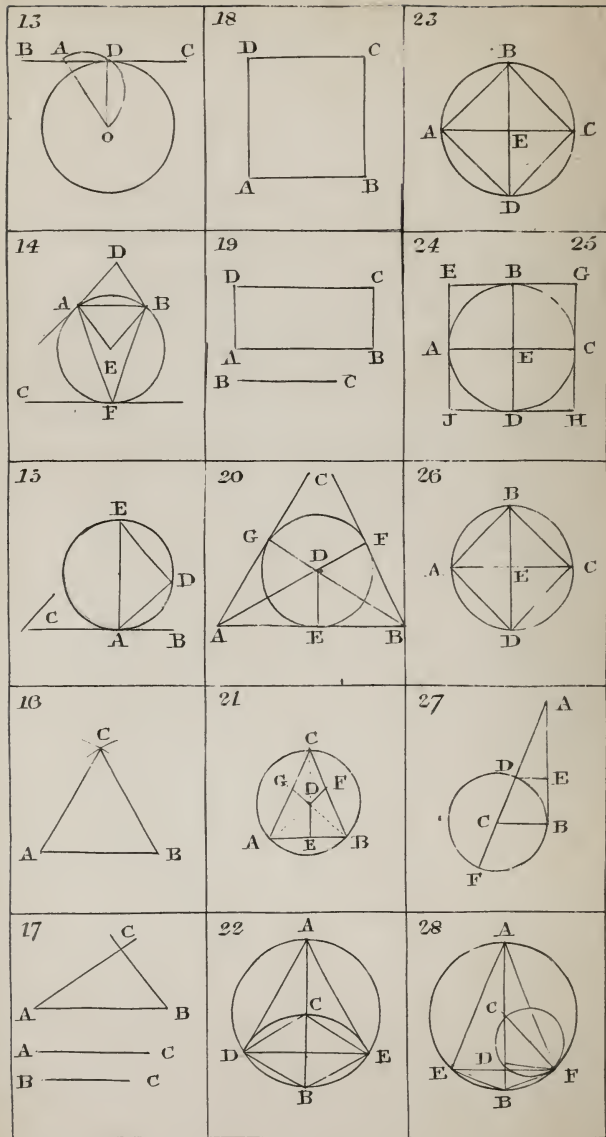
# Plate 4

<p>1</p>	<p>4</p>	<p>9</p>
<p>2</p>	<p>5</p>	<p>10</p>
<p>3</p>	<p>6</p>	<p>11</p>
<p>3</p>	<p>7</p>	<p>12</p>
<p>4</p>	<p>8</p>	<p>13</p>



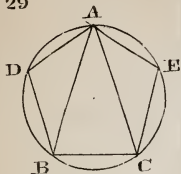


# Plate 5

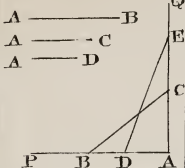


# Plate 6

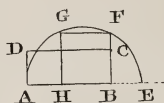
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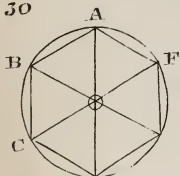
34



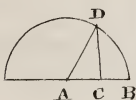
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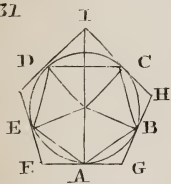
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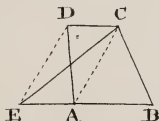
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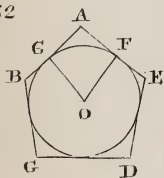
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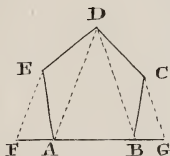
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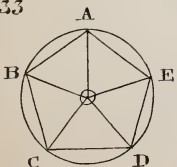
32



37



33



38

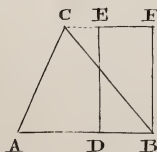
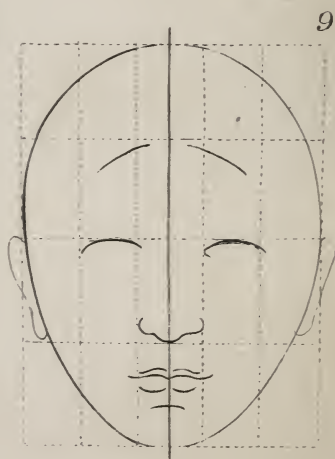
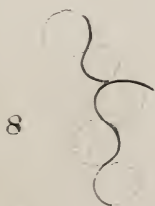
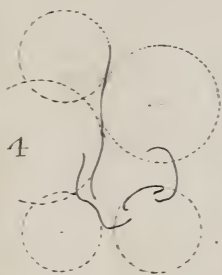
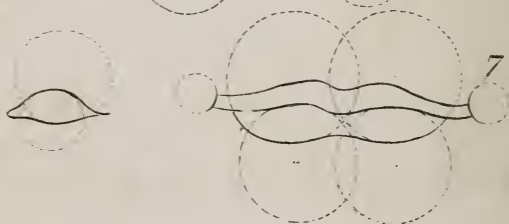
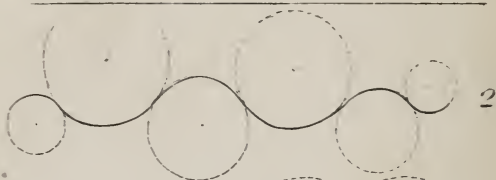
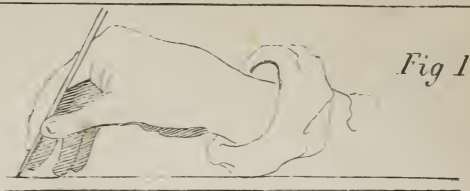




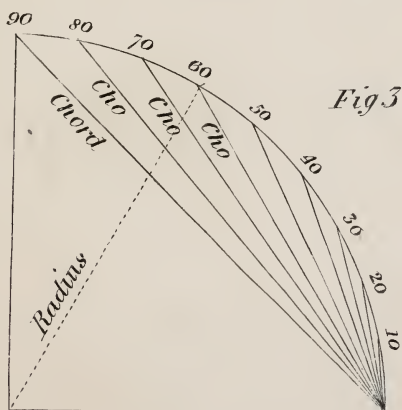
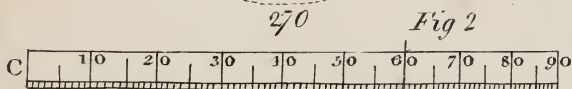
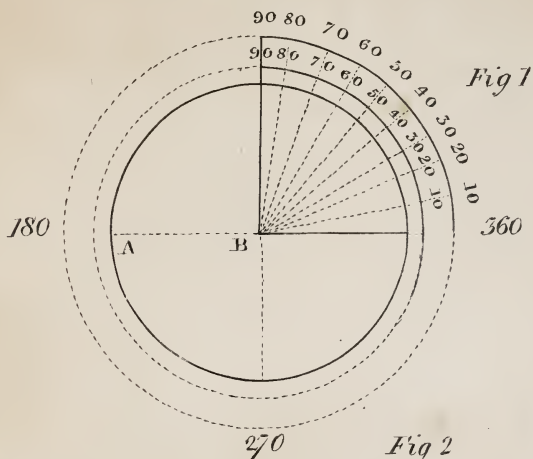


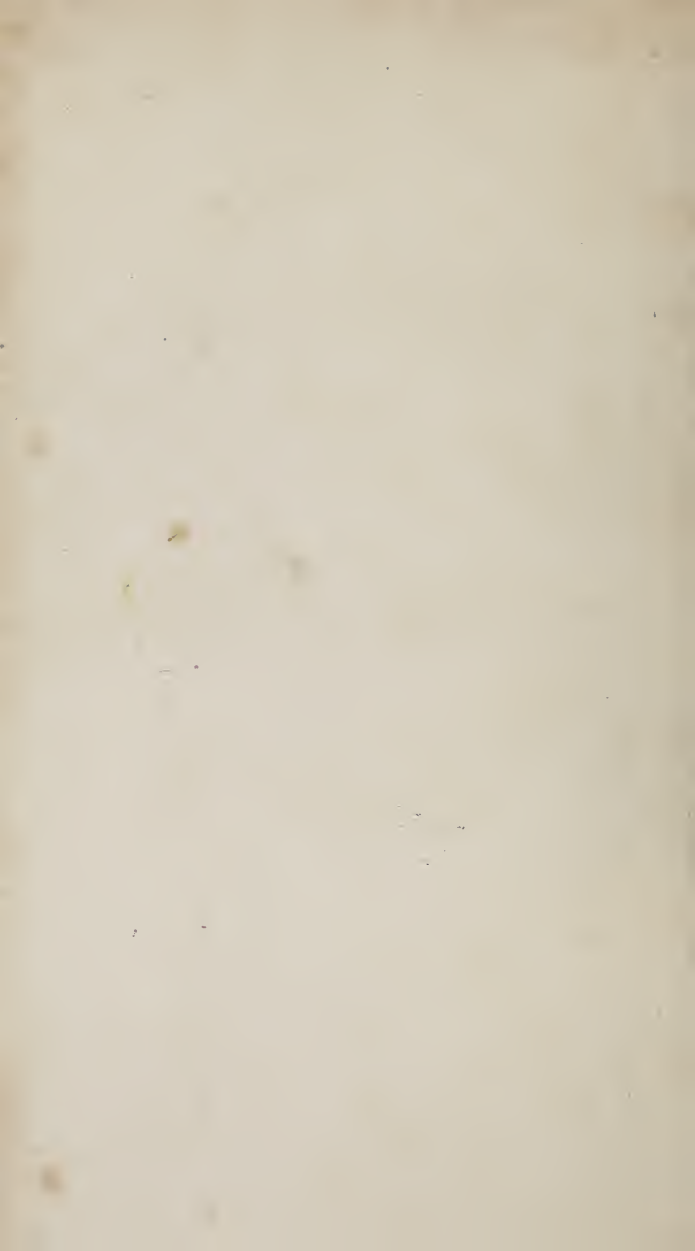


Plate 7



# Plate 8



















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